BROWNFIELD REDEVELOPMENT ASSESSMENT REPORT

FOR

Plymouth/Haggerty Road

City of Plymouth

Wayne County, MICHIGAN

MIB # 000000042

March 20, 2000

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EXECUTIVE SUMMARY

The Michigan Department of Environmental Quality (MDEQ) Pre-Remedial Group was contracted via a cooperative agreement with the United States Environmental Protection Agency (EPA) to conduct Brownfield Redevelopment Assessments (BFRA). A BFRA of the Plymouth/Haggerty Road property was conducted on August 24, 1999. The field-sampling event included the collection of twenty surficial soil samples, ten deep soil-boring samples and four surface water/sediment samples. The Michigan Department of Community Health (MDCH) is completing a Health Consultation Assessment of the property.

Analysis of the soil, surface water and sediment samples detected the presence of several organic and inorganic compounds at concentrations greater than the Generic Direct Contact Residential Cleanup Criteria of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). The MDEQ has determined that the property meets the definition of a facility as defined in Part 201 of the NREPA.

Based on the findings of the BFRA, the following issues should be addressed before, or during, the redevelopment of the Plymouth/Haggerty Road property:

- Prompt action should be taken to reduce the potential threat caused by the presence of contaminants of concern in the soils, surface water and sediments by removing or restricting access to the contaminated areas.

- Access to the property should be restricted due to the excessive physical hazards in these areas, consisting of large amounts of broken glass, rusted cans and other refuse. This would include removal of concentrated amounts of waste covering the area with a thick layer of soil followed by vegetation.

- An effort should be made to determine the type of wastes that was deposited in these areas and determine if there was any indication of industrial waste deposited in the dump.

- Other tentatively identified compounds were found at numerous locations at concentrations below the 201 criteria in the samples. The redevelopment of the property may require further investigation of these areas based on the intended use to determine the exact location of the release. Although we may have not identified the point of release, our investigation indicated a release has occurred on this property. (See Appendix C)

- The contaminants of concern should be considered with respect to responsibilities that may exist under Part 201 of the NREPA. The nature of any response activity that may be required is dependent on the intended use of the property and the party's liability under Part 201 of the NREPA. A person who is liable for the contamination is required to achieve cleanup of the property consistent with the cleanup criteria. The relevant criteria are a function of the intended property use, such as residential, commercial, or industrial. A non-liable developer is not required to implement a cleanup to achieve the appropriate cleanup criteria. However, a non-liable party must comply with the "due care" provisions specified in section 7a obligations of Part 201 of the NREPA. These obligations include not exacerbating the existing contamination, exercising due care to assure there are not unacceptable exposures, and taking reasonable precautions against the reasonable foreseeable activities of third parties.

INTRODUCTION

The MDEQ Pre-Remedial Group was contracted via a cooperative agreement with the EPA to conduct BFRAs. A brownfield is a property or a portion thereof, that has actual or perceived contamination and an active potential for redevelopment or reuse.

BFRAs are intended to provide information on abandoned properties where potential environmental contamination may be acting as an impediment to future redevelopment activities. MDEQ Pre-Remedial Group staff conduct environmental investigations to determine the types and locations of past and present industrial activities, potential environmental migration pathways of concern, types and concentrations of potential contaminants, and the need for remedial and/or removal actions on the property.

The MDEQ conducted a BFRA of the Plymouth/Haggerty Road property in accordance with the cooperative agreement with the EPA. The BFRA included file and information searches, a reconnaissance inspection of the property, and the collection of surficial soils, deep soils, surface water, and sediment samples.

PROPERTY BACKGROUND

Property Description

The property is located ¼ mile west of Plymouth/Haggerty Road in Plymouth. It consists of an area following along the Middle Rouge River, north side and having a very steep bank. The property is owned by Wayne County and is a part of the county wide public park system.

See Figure 1 for the Property Location Map.

Property History

In 1994 Wayne County contacted the Southeast Michigan District Office of the MDEQ regarding three seeps along the bank of the Rouge River within their Hines River Parkway. Further investigation from the district staff and Wayne County indicated dumping had occurred along the bluff and exposed waste was evident. A concern of the county was that the new senior citizens home was built on this waste and excess waste was pushed towards the river. The waste consisted mostly of bottles, jars, rusted cans, glassware and household items. There was no evidence that the dump extended to the river, nor was there any indication of industrial waste in the dump area.

There were no previous environmental studies conducted at this property to our knowledge. The county requested a BFRA be conducted in the dump to determine the content of both chemical and physical hazards, if any, to aid in planning and remediation to improve the park area.

PROCEDURES AND RESULTS

A reconnaissance inspection of the Plymouh/Haggerty Road property and surrounding area was conducted on March 25, 1999 to make observations to aid in characterizing the property. The reconnaissance inspection involved a seven person investigative team consisting of four MDEQ Pre Remedial project managers, a MDEQ Geologist, a representative from the Wayne County Department of Public Services and a representative from Environmental Consulting and Technology (ECT). The team documented the debris types located throughout the property and safety requirements for conducting on-site activities. They also identified the environmental concerns associated with each area on the property.

The sampling investigation of the Plymouth/Haggerty Road property was performed on August 24, 1999. Prior to conducting the sampling activities, the investigation team performed a reconnaissance walk-through of the property to mark any additional health and safety requirements and to determine the sampling locations. After samples were taken each location was precisely located using the Global Positioning System (GPS).

As part of the BFRA, the MDCH accompanied the investigation team during the reconnaissance walk-through of the property and performed a Health Consultation Assessment. The results of the MDCH Health Consultation Report of the Plymouth/Haggerty Road property will be provided upon completion and referenced as Appendix B in this report.

Reconnaissance Inspection Observations

The property is heavily wooded and extends from Haggerty Road west along the Rouge River. Adjacent to the creek is a narrow floodplain which then rises steeply to the north. We found three seeps along the steep bank and one discharge pipe. Evidence of waste disposal consisting of broken bottles, rusted cans, tires, metal scraps, drain tiles and household waste was discovered on the downward slope. The property is not fenced which allows access to exposed waste and physical hazards. There is a senior citizens housing complex along the north edge of the property. See Figure 2 for Property Features Map. Photographs of the Plymouth/Haggerty Road property and samples collected during the BFRA are provided in Appendix A.

Sampling Procedures and Results

On August 24, 1999, the investigation team collected twenty surficial soil boring samples, ten deep soil samples, four surface water and four sediment samples from suspected areas of contamination at the property. These samples were collected by the investigation team to determine the levels of EPA Target Compound List compounds (organic compounds) and Target Analyte List analytes (inorganic compounds), which may be present at, or migrating from, the property.

Standard MDEQ collection and decontamination procedures, as outlined in the work plan, were adhered to during the collection of all samples.

All samples were packaged and shipped in accordance with EPA and MDEQ required procedures and all EPA and MDEQ quality assurance/quality control procedures were followed. Laboratory analytical data for all the sample analyses are provided in Appendix C. Part 201 Generic Cleanup Criteria and Screening levels are also provided in Appendix E.

As part of the BFRA, the MDCH accompanied the investigation team during the reconnaissance inspection and performed a Health Consultation Assessment. The results of the MDCH Health Consultation Report of the Phymouth/Haggerty Road property will be provided upon completion and is referenced as Appendix B in this report.

Surficial Soil Samples

Twenty surficial soil samples were collected. The intent of the surficial soil sampling was to characterize any potential contaminated surficial soil areas, to determine the potential for possible contaminant migration from potential source areas, and the potential health and safety concerns including threats posed to nearby residential populations, future workers, or other resources, associated with the surficial soils at the property.

All surficial soil samples were collected using stainless steel trowels according to the procedures outlined in the work plan. See Figure 3 for a map showing surficial soil sample locations. A description of the surficial soil sample locations and the sample characteristics can be found in Table 1. Table 2 gives a summary of the surficial soil sample analytical results with comparisons to background concentrations and lists the Generic Cleanup Criteria exceedences of Part 201 of the NREPA.

Analysis of the surficial soil samples collected for the BFRA indicated elevated levels of inorganic compounds above the Part 201 cleanup criteria. Those compounds consist of aluminum which was found in all samples with concentrations ranging from 3,920 milligram per kilogram (mg/kg) to 8,900 mg/kg, and iron found in all samples with concentrations ranging from 9,200 mg/kg to 49,200 mg/kg. Also found at levels above the Part 201 cleanup criteria were naphthalene at 3,100 ug/kg, carbazole at 2,000 ug/kg and fluoranthene at 20,000 ug/kg. At numerous sample locations a variety of compounds were found below 201 criteria, but should be noted. They are the following: pentachlorophenol, 2-methylnaphthalene, acenaphthylene, phenanthrene, anthracene, di-n-butylphthalate, 1,2,4-trichlorobenzene, pyrene, 2 chloropheol, n-nitroso-di-n-propylamine, di-n-octyphthalate, benzo(a)anthracene, chrysene, benzo(b)fluorathene, benzo(a)pyrene, indeno(1,2,3,-cd)pyrene, dibenz(a,h)anthracene, benzo(g,h)perylene, 4,4,-DDE, 4,4-DDT, endosulfan, 4,4-DDD, endosulfan sulfate, heptachlor, endrin ketone, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, lead, magnesium, manganese, mercury, nickel, potassium, selenium, silver, sodium, thallium, cadmium, zinc and cyanide. These would indicate an unknown release was made in this area.

Soil Boring Samples

The intent of the soil boring sampling was to characterize any potential contamination in the deep soils on the property. Also, to determine if any downward migration of possible contamination had occurred from probable source areas, and to determine the potential health and safety concerns including threats posed to nearby residential populations, future workers, or resources associated with the deep soils at the property. Ten soil boring samples were collected.

All soil boring samples were collected utilizing hand augers according to the procedures outlined in the work plan. See Figure 3 for a map showing soil boring sample locations. A description of the soil boring sample locations and the sample characteristics can be found in Table 3. Table 4 gives a summary of the soil boring sample analytical results with comparisons to background concentrations and lists the Generic Cleanup Criteria exceedences of Part 201 of the NREPA.

Analysis of the soil borings samples collected during the BFRA detected the presence of aluminum at concentrations ranging from 5,460 mg/kg to 11,500 mg/kg also iron ranging from 13,000 mg/kg to 74,000 mg/kg at concentrations greater than the Generic Residential and Industrial Direct Contact Cleanup Criteria of Part 201 of the NREPA. The analysis also detected several other compounds above the Part 201 cleanup criteria. These include: phenanthrene, di-n-butylphthalate, fluoranthene, pyrene, benzo(a)anthracene, chrysene, bis(2 ethylhexyl)phthalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo (g,h,i)perylene, naphthalene, 2-methylnapthalene, acenaphthene. dibenzofuran, diethylphthalate, fluorene, anthracene, carbazole, butylbenzylphthalate, benzo(a)anthracene, dibenz(a,h)anthracene, 4,4 DDE, 4,4 DDD, 4,4 DDT, 1,2,4 trichlorobenzene, 4 chloro-3-methylphenol, 2,4 dinitrotoluene, pentachlorophenol, chrysene,

chlordane, lindane aldrin, dieldrin, endrin, methoxychlor, aluminum, arsenic, barium, beryllium, calcium, chromium, cobalt, copper, lead, magnesium, manganese, nickel, potassium, selenium, sodium, thallium, vanadium, zinc, and cyanide. Table 4 gives a summary of the soil boring sampled and analytical results with comparisons to background concentrations and lists the Industrial and Commercial II III, and IV, Direct Contact Cleanup Criteria of Part 201 of the NREPA.

Surface Water Samples

The surface water samples were collected to determine if there was any migration of possible contamination to the Rouge River. These samples were also collected to determine the potential health and safety concerns, if any, associated with this water body. Four surface water samples, including one duplicate sample, were collected from seeps along the steep banks and a discharge pipe adjacent to the Rouge River. One up-gradient sample was taken. These samples were collected to characterize any possible contamination to the water on or adjacent to the property and to determine any direct contact or drinking water threats posed to nearby residential populations and future workers or any threats posed to any resources.

All surface water samples were collected by direct immersion of the sample bottle according to the procedures outlined in the work plan. See Figure 5 for a map showing surface water sample locations. Surface water sample location and characteristic descriptions can be found in Table 5. A summary of the surface water sample analytical results with comparisons to background concentrations and a list of Generic Cleanup Criteria exceedences of Part 201 of the NREPA are found in Table 6.

Analysis of the surface water samples collected during the BFRA detected the presence of aluminum in SW2 at 810 microgram per liter (ug/L), SW2D at 277 ug/L, SW3 at 808 ug/L and SW4 at 525 ug/L. Iron was found in SW2 at 1,670 ug/L, SW3 at 1,480 ug/L and SW4 at 1520 ug/L. Also, in SW4 cadmium was found at 16.9 ug/L, lead at 44.3 ug/L and zinc at 2,780 ug/L. These concentrations exceeded the Groundwater Surface Water Interface Criteria. Other compounds were found at each location which should be noted although were below the levels of concern. These are benzene, toluene, phenanthrene, fluoranthene, pyrene, chrysene, benzo(a)pyrene, benzo(g,h,i)perylene, acenaphthylene, acenaphthene, dibenzofuran, phenanthrene, carbozole, di-n-butylphthalate, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene, di-n-octyphthalate, c-chlorophenol, 1-4 dichlorobenzene, n-nitroso-di-n-propylamine, 1,2,4-trichlorobenzene, 4-chloro-3-methylphenol, 4-nitrophenol, chlordane, aldrin, heptachlor epoxide, 4,4-DDD, 4,4-DDT, 4,4-DDE, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, magnesium, manganese, nickel, potassium, selenium, sodium, thallium, vanadium, zinc and cyanide.

Sediment Samples

The intent of the sediment sampling was to determine if there had been any migration of possible contamination into the sediments of the Rouge River and to determine the potential health and safety concerns including threats posed to nearby residential populations, future workers, or resources associated with these sediments. Four sediment samples were collected from three seeps and one discharge pipe adjacent to the Rouge River.

All sediment samples were collected utilizing a hand held sediment corer according to the procedures outlined in the work plan. See Figure 5 for a map showing the sediment sample locations. A description of the sediment sample locations and the sample characteristics can be found in Table 7. Table 8 gives a summary of the sediment sample analytical results with comparisons to background concentrations and lists the Generic Cleanup Criteria exceedences of Part 201 of the NREPA.

Analysis of the sediment samples collected detected the presence of aluminum in SD1 at 9,190 mg/kg, and SD3 at 5,460 mg/kg. Iron was found in SD1 at 17,800 mg/kg, SD2 at 17,000 mg/kg and SW3 at 13,000 mg/kg. The above noted samples exceeded The Industrial & Commercial II, III, and IV, for Groundwater Surface Water Interface Protection Criteria. Other compounds found in the sediment samples at concentrations below the Part 201 cleanup criteria are acenaphthylene, acenaphthene, dibenzofuran, fluorene, phenanthrene, anthraene, carbazole, di-n-butylphthalate, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene, heptachlor, 4,4 DDE, 4,4 DDT, 4,4, DDD, chlordane, aldrin, heptachlor epoxide, arsenic, barium, beryllium, calcium, chromium, cobalt, copper, lead, magnesium, manganese, nickel, potassium, selenium, sodium, thallium, vanadium, zinc, and cyanide.

Most of the contaminants were consistent throughout the samples and should be addressed on a wide scale removal.

DISCUSSION

Analysis of the surficial soil, deep soil, surface water, and sediment samples collected during the BFRA, detected the presence of several compounds. These contaminants of concern were detected at concentrations greater than the Generic Residential Cleanup Criteria of Part 201 of the NREPA. Because these contaminants were detected at concentrations in excess of the Generic Residential Cleanup Criteria, the Plymouth/Haggerty Road property qualifies as a facility under Part 201 of the NREPA.

Aluminum and iron were found in all but one sample at concentrations greater than the Residential and Commercial I Direct Contact Cleanup Criteria of Part 201 of the NREPA.

Based on the findings of the BFRA investigation and the MDCH Health Consultation Assessment, the following issues should be addressed before or during the redevelopment of the Plymouth/Haggerty Road property:

- Action should be taken to abate the potential threat caused by the presence of contaminants of concern in the soils, surface water and sediment by mitigation of these contaminants.

- Access to the property should be restricted due to the excessive physical hazards in these areas, consisting of large amounts of broken glass, rusted cans and other refuse. This would include removal of concentrated amounts of waste covering the area with a thick layer of soil followed by vegetation.

- An effort should be made to determine the type of wastes that was deposited in these areas and determine if there was any indication of industrial waste deposited in the dump.

- Other tentatively identified compounds were found at numerous locations at concentrations below the 201 criteria in the samples. The redevelopment of the property may require further investigation of these areas based on the intended use to determine the exact location of the release. Although we may have not identified the point of release, our investigation indicated a release has occurred on this property. (See Appendix C)

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is not required to implement a cleanup to achieve the appropriate cleanup criteria. However, a non-liable party must comply with the "due care" provisions specified in section 7a obligations of Part 201 of the NREPA. These obligations include not exacerbating the existing contamination, exercising due care to assure there are not unacceptable exposures, and taking reasonable precautions against the reasonable foreseeable activities of third parties.

BIBLIOGRAPHY

1. Aerial photos from 1957, 1961, 1972, 1991 and 1997

2. Discussion with Wayne County Department of Public Works.

3. Review of Division of Public Service Files, Wayne Co., March 1994.

FIGURES

Figure 1:Property Location Map

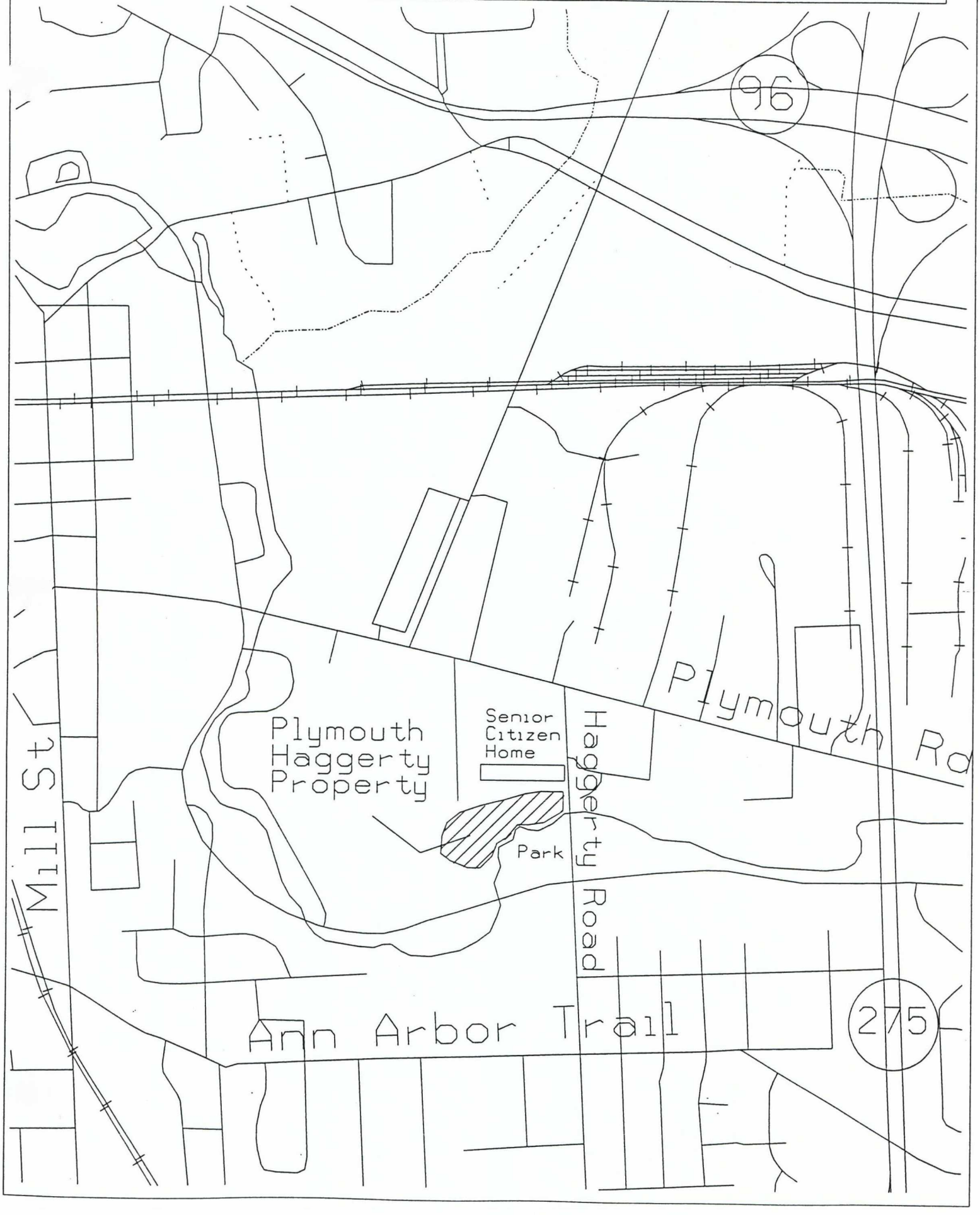
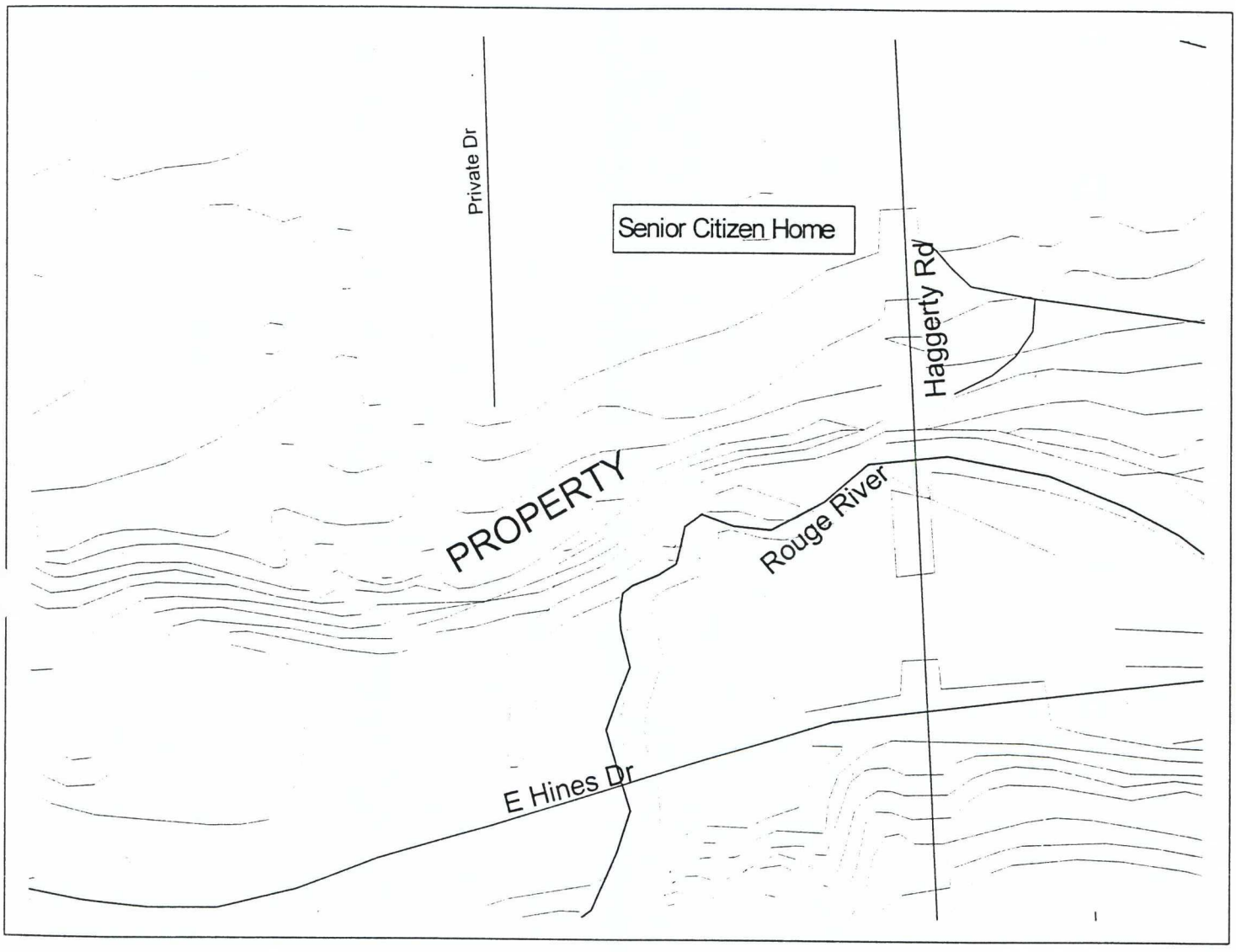


Figure 2: Property Features Map



400 0 400 800 Feet

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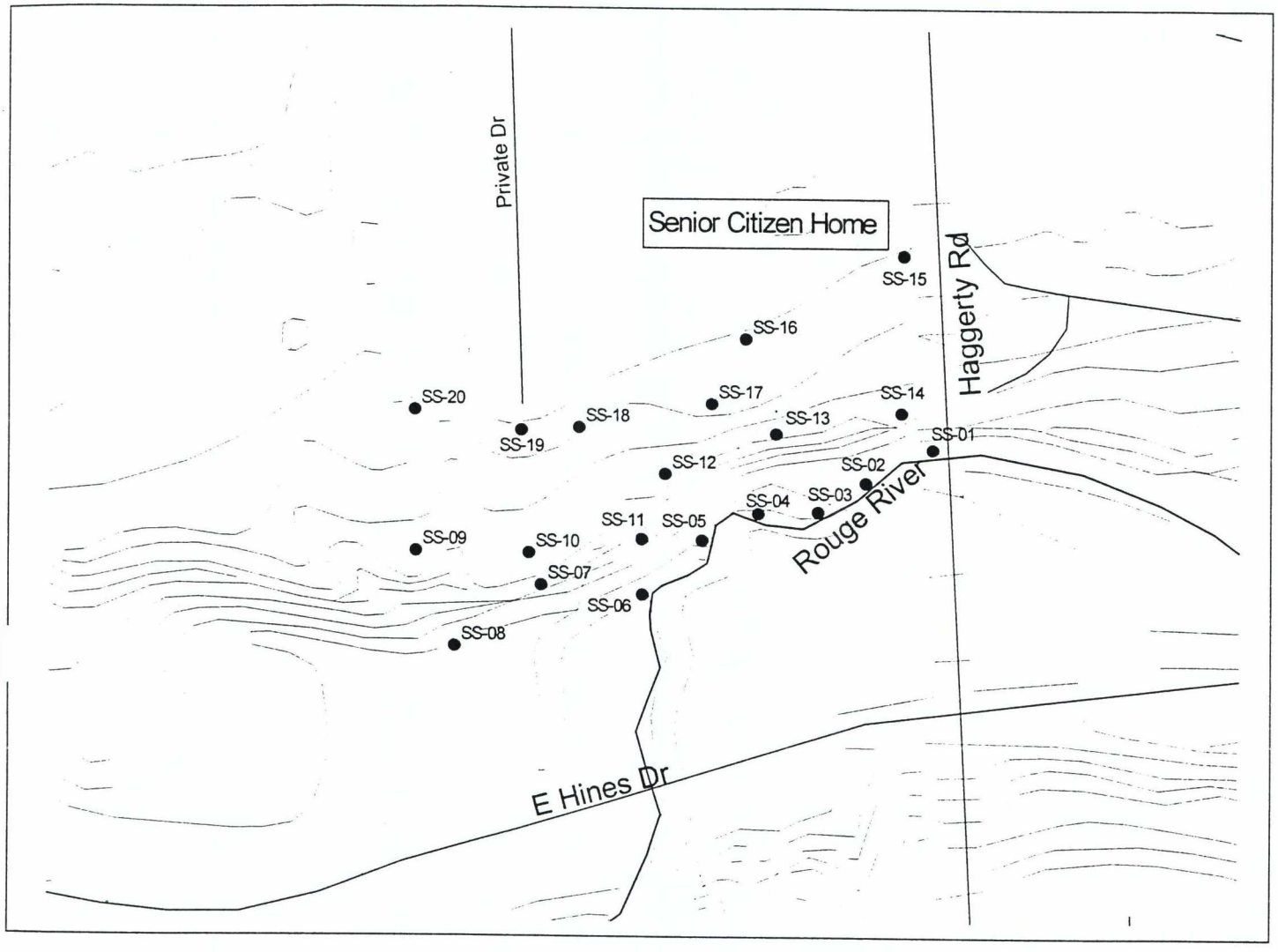
Compiled December, 1999
MIRIS Base
State Plane - NAD 27
Compiled by KAK

Figure 3: Surficial Soil Samples



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Legend

- SS-01 - Surficial Soil 1

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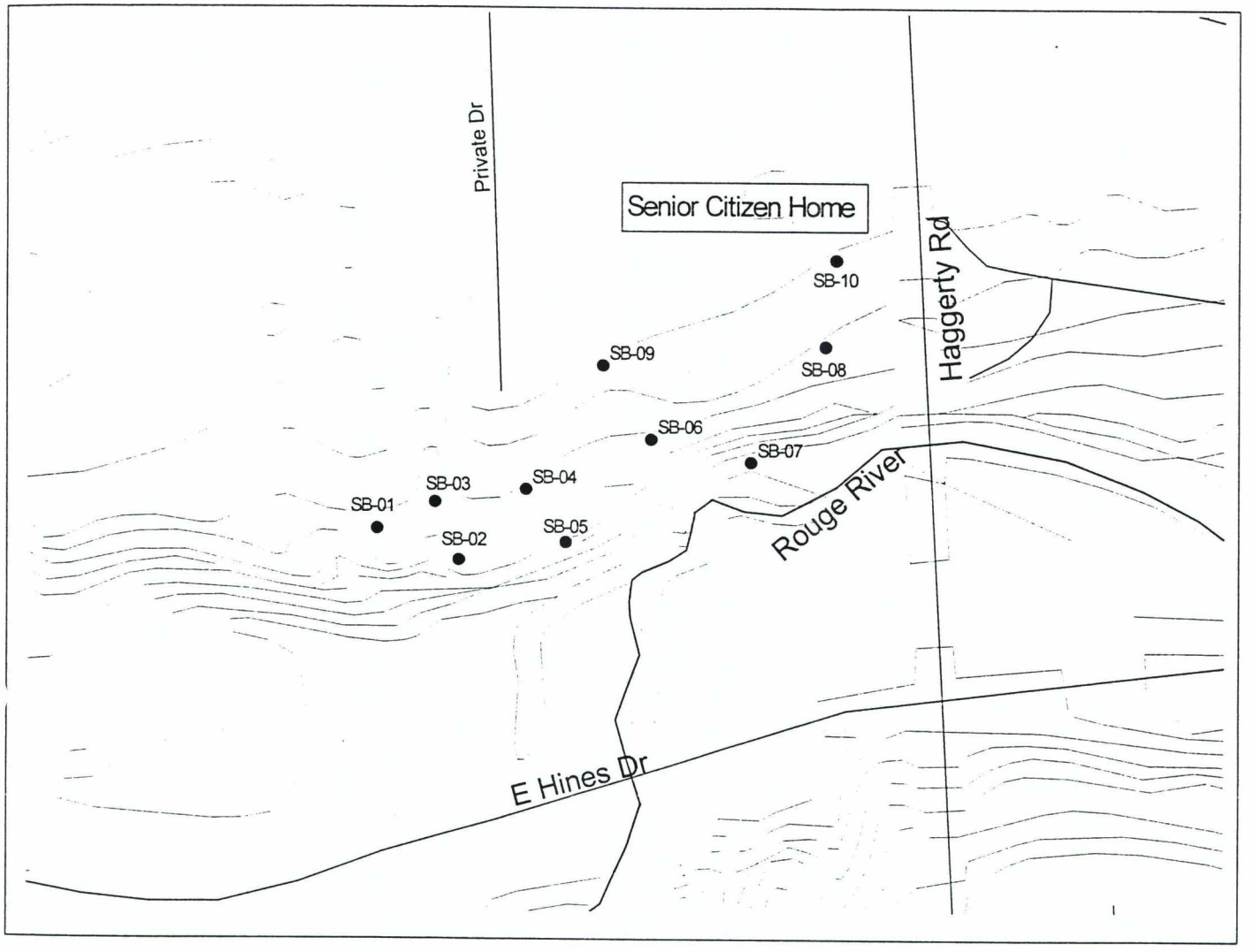
Compiled December, 1999
MIRIS Base
State Plane - NAD 27
Compiled by KAK

Figure 4: Soil Boring Sample Locations



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Legend

- SB-01 - Soil Boring 1

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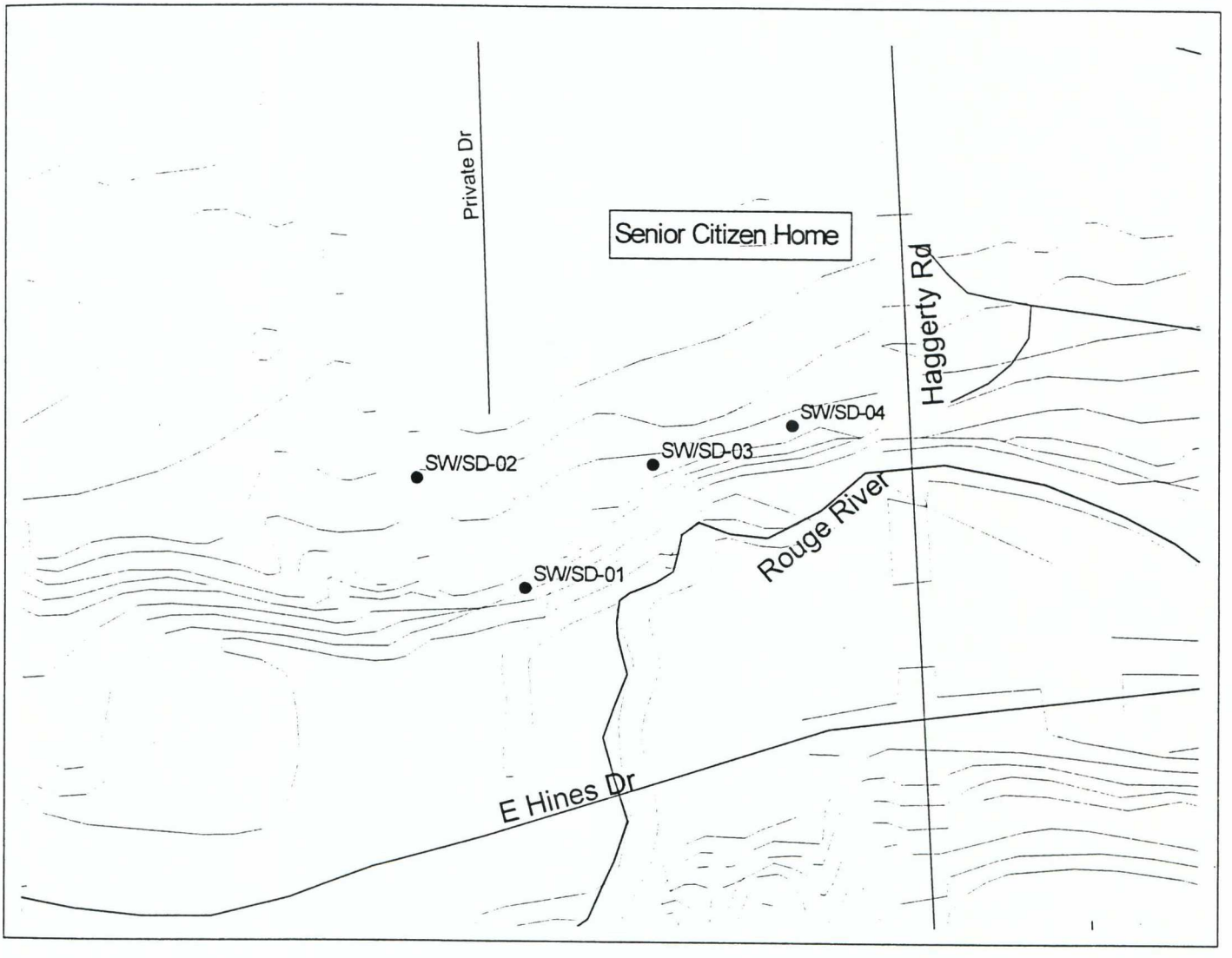
Compiled December, 1999
MIRIS Base
State Plane - NAD 27
Compiled by KAK

Figure 5: Surface Water/Sediment Sample Locations



300 0 300 600 Feet

Legend

- SW/SD-01 - Surface Water/Sediment 1

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Compiled December, 1999
MIRIS Base
State Plane - NAD 27
Compiled by KAK

TABLES

TABLE 1

SURFICIAL SOIL SAMPLE DESCRIPTIONS

SAMPLE #	DEPTH	DESCRIPTION	DESIGNATION
SS1 Location: GPS – See map.	Cover 0-3 in.	Twigs, broken glass Dark brown, fine to medium sand mixed into soil, dry with some roots and gravel. Note: Some scattered broken glass on surface in the vicinity of the sample location.	Shallow, Grab sample 0-3 in.
SS2 Location: GPS – See map.	Cover 0-3 in.	Leaves and twigs. Moist dark brown clayey soil with fine to medium grained sand and with some roots. Note: Sample collected between runoff seep and river.	Shallow, Grab sample 0-3 in.
SS3 Location: GPS – See map.	Cover 0-3 in.	Wet bare soil. Wet dark brown clayey soil with some fine to medium grained sand mixed with some roots. Note: Sample collected from wet seep about 10 ft before seep flows into river.	Shallow, grab sample 0-3 in.
SS4 Location: GPS – See map.	Cover 0-3in.	Twigs and pieces of glass. Dark brown, dry, clayey soil mixed with some fine to medium grained sand, roots and some glass. Note: Sample collected in area of broken glass, just above river.	Shallow, grab sample 0-3 in.
SS5 Location: GPS – See map.	Cover 0-3 in.	Twigs. Dark brown, dry clayey soil with fine to medium grained sand with some roots.	Shallow, grab sample 0-3 in.
SS6 Location: GPS – See map.	Cover 0-3 in.	Leaves and twigs. Dark brown to gray wet clayey soil mixed with fine to medium grained sand and roots, some small stones. Note: Sample collected in flat area with standing water. Scattered trash around the sample location.	Shallow, grab sample 0-3 in.
SS7 Location: GPS – See map.	Cover 0-3 in.	Leaves, wigs, trash and glass. Dry, dark brown clayey soil mixed with fine to medium grained sand, some roots. Note: Sample collected from dry runoff with lots of exposed trash.	Shallow, grab sample 0-3 in.

TABLE 1 (cont.)

SURFICIAL SOIL SAMPLE DESCRIPTIONS

SAMPLE #	DEPTH	DESCRIPTION	DESIGNATION
SS8 Location: GPS – See map.	Cover 0-3 in.	Bare soil. Wet dark-brown to black clayey soil with trace of fine to medium grained sand; red staining only on top crust of the soil. Note: Sample collected from wall of drainage ditch with running water bellow SS18 location. Some red sliming is draining in and just above sample location.	Shallow, grab sample 0-3 in.
SS9 Location: GPS – See map.	Cover 0-3 in.	Dead leaves. Black, very moist clayey soil with some fine grained sand. Note: Sample collected from side of drainage ditch above water level.	Shallow, grab sample 0-3 in.
SS10 Location: GPS – See map.	Cover 0-3 in.	Dry, dark brown clayey soil with fine to medium grained sand, some wood chips. Note: Sample collected near juncture of large gully and river by rusted 55-gallon drum.	Shallow, grab sample 0-3 in.
SS11 Location: GPS – See map.	Cover 0-3 in.	Twigs. Dry, dark brown clayey soil with fine to medium grained sand, some root sand gravel and trace of glass shards. Note: Sample collected from runoff gully half way between building and river.	Shallow, grab sample 0-3 in.
SS12 Location: GPS – See map.	Cover 0-3 in.	Twigs, broken glass. Dark brown, clayey soil, clumpy with fine to medium grained sand, roots. Note: Sample collected from exposed trash area along the slope from below building with fence. Trash included broken glass, metal bed spring, dead lamp light bulbs.	Shallow, grab sample 0-3 in.
SS13A Location: GPS – See map.	Cover 0-3 in.	Twigs, glass shards. Dry, dark brown, clayey soil with fine to medium grained sand, with roots and glass shards. Note: Sample collected form dry gully below building two, gully full of trash, bottles, bricks and twigs.	Shallow, grab sample 0-3 in.

TABLE 1 (cont.)

SURFICIAL SOIL SAMPLE DESCRIPTIONS

SAMPLE #	DEPTH	DESCRIPTION	DESIGNATION
SS13B Location: GPS – See map.	Cover 0-3 in.	Glass shards and twigs. Dark brown, dry clayey soil with some fine to medium grained sand, gravel and glass shards. Note: Sample collected on steep slope in trash exposure/erosion below building.	Shallow, grab sample 0-3 in.
SS14 Location: GPS – See map.	Cover 0-3 in.	Dead leaves, broken glass. Dry, dark brown clayey soil mixed with some sand, stones, glass shards and roots.	Shallow, grab sample 0-3 in.
SS15 Location: GPS – See map.	Cover 0-3 in.	Twigs and dead leaves. Dry and clumpy light brown clayey soil with fine to medium sand with small roots. Note: Sample collected near storm drain and bridge near river.	Shallow, grab sample 0-3 in.
SS16 Location: GPS – See map.	Cover 0-3 in.	Twigs, dead leaves and broken glass. Dry, dark brown clayey soil mixed with fine to medium grained sand, some rocks and glass shards. Note: Sample collected on steep slope back below building.	Shallow, grab sample 0-3 in.
SS17 Location: GPS – See map.	Cover 0-3 in.	Bare ground. Dry, dark brown clayey soil mixed with fine to medium grained sand with some roots. Note: Sample collected at top of slope below building with piled underblock, patio stones, concrete nearby. Large outfall opening.	Shallow, grab sample 0-3 in.
SS18 Location: GPS – See map.	Cover 0-3 in.	Bare soil. Dry, dark brown sandy soil mixed with large amount of gravel. Note: Sample collected beneath outfall pipe south of building along top of slope.	Shallow, grab sample 0-3 in.
SS20 Location: GPS – See map.	Cover 0-3 in.	Dead leaves, twigs. Dry, dark brown clayey soil mixed with some fine to medium grained sand. Note: Sample collected at top of slope before building; very little trash or debris exposed in the area.	Shallow, grab sample 0-3 in.

TABLE 2
SURFICIAL SOIL SAMPLE SUMMARY

SAMPLE #	CONTAMINANT	SAMPLE CONCENTRATION	BACKGROUND CONCENTRATION	PART 201 CLEANUP CRITERIA & SCREENING LEVEL EXCEEDANCE
SS1	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	6410	3870	11,21
	Iron	25900	8330	11,21
SS2	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	5540	3870	11,21
	Iron	11700	8330	11,21
SS3	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	4060	3870	11,21
	Iron	9200	8330	11,21
SS4	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	8570	3870	11,21
	Iron	18400	8330	11,21
SS5	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	4980	3870	11,21
	Iron	11800	8330	11,21
SS6	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	4340	3870	11,21
	Iron	11200	8330	11,21
SS7	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	5510	3870	11,21
	Iron	11800	8330	11,21
SS8	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	8900	3870	11,21
	Iron	32800	8330	11,21
SS9	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	8170	3870	11,21
	Iron	18800	8330	11,21
SS10	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	4820	3870	11,21
	Iron	49200	8330	11,21
SS11	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	7760	3870	11,21
	Iron	16100	8330	11,21
SS12	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	8460	3870	11,21
	Iron	21200	8330	11,21
SS13	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	6110	3870	11,21
	Iron	19200	8330	11,21

TABLE 2
SURFICIAL SOIL SAMPLE SUMMARY

SAMPLE #	CONTAMINANT	SAMPLE CONCENTRATION	BACKGROUND CONCENTRATION	PART 201 CLEANUP CRITERIA & SCREENING LEVEL EXCEEDANCE
SS14	**Semi-volatiles**	**ug/kg**	**ug/kg**	**Criteria[a]**
	Naphthalene	3100	350U	12
	Inorganics	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	6470	3870	11,21
	Iron	26500	8330	11,21
SS15	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	8590	3870	11,21
	Iron	19600	8330	11,21
SS16	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	4280	3870	11,21
	Iron	12800	8330	11,21
SS17	**Semi-volatiles**	**ug/kg**	**ug/kg**	**Criteria[a]**
	Carbazole	2000	1700U	11,12
	Fluoranthene	20000	3400U	12
	Inorganics	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	3920	3870	11,21
	Iron	19100	8330	11,21
SS18	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	5410	3870	11,21
	Iron	24600	8330	11,21
SS19	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	6910	3870	11,21
	Iron	19400	8330	11,21
SS20	**Surficial Soil Background Sample**			

ug/kg- microgram per kilogram [parts per billion (ppb)].
mg/kg- milligram per kilogram [parts per million (ppm)].
U- The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
A total of twenty (20) surficial soil samples, including a designated background sample, were collected during the brownfield investigation.

TABLE 3

SOIL BORING SAMPLE DESCRIPTION

BORING NUMBER	SPOON INTERVAL	UNIT THICKNESS	LITHOLOGICAL DESCRIPTION	SAMPLE DESIGNATION
SB1 Location: GPS – See map.	Core: 0-24 in Recovery: ~ unknown	0-6 in. 6-12 in. 12-18 in. 18-24 in.	Dry silt fine clay Dry silty fine clay with dry clay in the last 3 in. Medium brown silty sand, slightly damp. Brown clay with lenses of medium sand and fine gravel.	Hand auger. (0-24 in.)
SB2 Location: GPS – See map.	Core: 0-30 in Recovery: ~ unknown	0-6 in. 6-12 in. 12-18 in. 18-24 in. 24-30 in.	Dry brown clayey loam/fine sand. Dry brown clayey loam. Dry brown clayey loam. Dry brown clayey loam with fine sand and clay in last 2 in. Fine sand with clay (top 3 in.) to dense dry brown clay.	Hand auger. (0-30 in.)
SB3 Location: GPS – See map.	Core: 0-30 in Recovery: ~unknown	0-6 in. 6-12 in. 12-18 in. 18-24 in. 24-30 in.	Dry brown clayey Loam. Transition from dry brown clayey Loam to dry brown/tan clay. Dry brown tan clay. Dry brown tan clay. Dry brown tan clay with dry brown clay in last 1- 2 in.	Hand auger. (0-30 in.)
SB4 Location: GPS – See map.	Core: 0-24in Recovery: ~unknown .	0-6 in. 6-12 in. 12-18 in. 18-24 in.	Dry brown clayey loam. Dry tan clay with with 1 in. root. Moist tan clay. Moist clay.	Hand auger. (0-24in.)
SB5 Location: GPS – See map.	Core: 0-30 in Recovery: ~ unknown	0-6 in. 6-12 in. 12-24 in. 24-30 in.	Fluffy dry brown clayey loam. Fluffy dry brown clayey loam with some broken glass. Fluffy dry brown clayey loam with some broken glass until 18 in. and with no glass from 18 to 24 in. Fluffy dry brown clayey loam grading to dry brown clay.	Hand auger. (0-30 in.)

TABLE 3 (cont.)

SOIL BORING SAMPLE DESCRIPTION

BORING NUMBER	SPOON INTERVAL	UNIT THICKNESS	LITHOLOGICAL DESCRIPTION	SAMPLE DESIGNATION
SB6 Location: GPS – See map.	Core: 0-42 in Recovery: ~ unknown	0-6 in. 6-12 in. 12-18 in. 18-24 in. 24-28 in. 28-32 in. 32-36 in. 36-42 in. 42-48 in.	Dry clay loam. Dry clay loam with some roots. Dry clay loam with some roots and small stones and some moisture in clay at 18 in. Clay loam with some stones. Clay loam with some stones. Clay loam with some stones. Clay loam with some stones. Clay loam with some stones. Clay loam with some stones with some hardpan and small stratified rocks.	Hand auger. (0-48 in.)
SB7 Location: GPS – See map.	Core: 0-48 in Recovery: ~ unknown	0-6 in. 6-12 in. 12-18 in. 18-24 in. 24-36 in. 36-48 in.	Dry brown clayey loam. Dry brown clayey loam. Dry brown clay. Dry brown clay. Dry brown clay. Slightly damp brown clay with some gray clay (non mottling)	Hand auger. (0-48 in.)
SB8 Location: GPS – See map	Core: 0-24 in Recovery: ~ unknown	0-6 in. 6-12 in. 12-18 in. 18-24 in.	Gray/brown sandy loam with some gravel. Gray/brown sandy loam. Brown sandy loam with some clay. Brown sand with clay.	Hand auger. (0-48 in.)
SB9 Location: GPS – See map.	Core: 0-30 in Recovery: ~unknown	0-6 in. 6-12 in. 12-18 in. 18-24 in. 24-30 in.	Orange fine sand. Orange fine sand with fine orange yellow gravel and some roots. Sand grading into dry brown clay. Dry brown clay, heavy clay at bottom. Dry brown clay.	Hand auger. (0-30 in.)
SB10 Location: GPS – See map.	Core: 0-18 in Recovery: ~unknown	0-6 in. 6-12 in. 12-18 in. 18-24 in. 24-30 in. 30-36 in.	Dry brown sandy loam with glass, metal and wood. Dry brown sandy loam with glass, metal and wood. Sandy loam with fine gravel. Sandy loam with fine gravel and some glass. Sandy loam with fine gravel and some glass. Sandy loam with fine gravel and some glass.	Hand auger. (0-36 in.)

TABLE 4
SOIL BORING SAMPLE SUMMARY

SAMPLE #	CONTAMINANT	SAMPLE CONCENTRATION	BACKGROUND CONCENTRATION	PART 201 CLEANUP CRITERIA & SCREENING LEVEL EXCEEDANCE
SB1	**Soil Boring Background Sample**			
SB2	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	9260	6310	11,21
	Iron	17700J	13000J	11,21
SB3	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	10600	6310	11,21
	Iron	19800J	13000J	11,21
SB4	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	6780	6310	11,21
	Iron	15000J	13000J	11,21
SB5	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	9250	6310	11,21
	Iron	21600J	13000J	11,21
SB6	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	10900	6310	11,21
	Iron	20500J	13000J	11,21
SB7	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	7070	6310	11,21
	Iron	14600J	13000J	11,21
SB8	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	10800	6310	11,21
	Iron	19800J	13000J	11,21
SB9	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	9420	6310	11,21
	Iron	40300J	13000J	11,21
SB10	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	11500	6310	11,21
	Iron	74000J	13000J	11,21

ug/kg- microgram per kilogram [parts per billion (ppb)].
mg/kg- milligram per kilogram [parts per million (ppm)]
J- The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample
A total of ten (10) soil boring samples, including a designated background sample, were collected during the brownfield investigation.

TABLE 5

SEDIMENT SAMPLE DESCRIPTION

SAMPLE #	DEPTH OF SAMPLE	DEPTH OF WATER AT SAMPLE LOCATION	DESCRIPTION	DESIGNATION
SD1	0-6 in.	0-1 in.	Very moist gray, silty clay with trace of fine sand, with some gravel and leaves and roots.	Background, shallow grab sample.
SD2	0-4 in.	8 in.	Wet brown medium-fine sand with some fine to coarse gravel with porcelain and glass debris.	Background, shallow grab sample.
SD3	0-5 in.	1/4 in.	Very moist brown mixed with gray silty clay with some fine-medium sand and fine to coarse gravel, leaves, twigs with some glass and metal debris.	Background, shallow grab sample.
SD4	0-3 in.	1/2 in.	Wet, brown to dark brown fine to medium silty sand with trace of fine gravel and clay, with a lot of organic debris, some glass, aluminum foil, concrete, tile, etc.	Background, shallow grab sample.

TABLE 6
SEDIMENT SAMPLE SUMMARY

SAMPLE #	CONTAMINANT	SAMPLE CONCENTRATION	BACKGROUND CONCENTRATION	PART 201 CLEANUP CRITERIA & SCREENING LEVEL EXCEEDANCE
SD1	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	9190	3390	11,21
	Iron	17800J	12500J	11,21
SD2	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Iron	17000J	12500J	11,21
SD3	**Inorganics**	**mg/kg**	**mg/kg**	**Criteria[a]**
	Aluminum	5460	3390	11,21
	Iron	13000J	12500J	11,21
SD4	**Sediment Background Sample**			

mg/kg- milligram per kilogram [parts per million (ppm)].
J- The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
A total of four (4) sediment samples, including the designated background sample, were collected during the brownfield investigation.

TABLE 7

SURFACE WATER SAMPLE DESCRIPTIONS

SAMPLE #	DEPTH OF SURFACE WATER	DESCRIPTION	COND. (µs/cm) PH TEMP. (°C)	DESIGNATION	COMMENTS
SW1	6 in.	Clear.	C = 2253 PH = 7.3 T = 19.7	Grab sample.	
SW2	8 in.		C = 3383 pH = 6.9 T = 18.6	Grab sample.	
SW3	¼ in.	Clear.	C = 3613 pH = 7.0 T = 20.9	Grab sample.	
SW4	½ in.	Clear.	C = 4100 pH = 7.5 T = 17.7	Grab sample.	

TABLE 8
SURFACE WATER SAMPLE SUMMARY

SAMPLE #	CONTAMINANT	SAMPLE CONCENTRATION	BACKGROUND CONCENTRATION	PART 201 CLEANUP CRITERIA & SCREENING LEVEL EXCEEDANCE
SW1	**Surface Water Background Sample**			
SW2	**Inorganics**	**ug/L**	**ug/L**	**Criteria[a]**
	Aluminum	810	216J	1,2
	Iron	1670	1060J	1,2
SW2D	**Inorganics**	**ug/L**	**ug/L**	**Criteria[a]**
	Aluminum	277J	216J	1,2
SW3	**Inorganics**	**ug/L**	**ug/L**	**Criteria[a]**
	Aluminum	808J	216J	1,2
	Iron	1480J	1060J	1,2
SW4	**Inorganics**	**ug/L**	**ug/L**	**Criteria[a]**
	Aluminum	525J	216J	1,2
	Cadmium	16.9	3.6	1,2
	Iron	1520J	1060J	1,2
	Lead	44.3	5.5J	1,2
	Zinc	2780J	340J	1

ug/L- microgram per Liter [parts per billion (ppb)].
J- The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
A total of five (5) surface water samples, including the background and duplicate samples, were collected during the brownfield investigation.

TABLE 1

SURFICIAL SOIL SAMPLE DESCRIPTIONS

SAMPLE #	DEPTH	DESCRIPTION	DESIGNATION
SS1 Location: GPS – See map.	Cover 0-3 in.	Twigs, broken glass Dark brown, fine to medium sand mixed into soil, dry with some roots and gravel. Note: Some scattered broken glass on surface in the vicinity of the sample location.	Shallow, Grab sample 0-3 in.
SS2 Location: GPS – See map.	Cover 0-3 in.	Leaves and twigs. Moist dark brown clayey soil with fine to medium grained sand and with some roots. Note: Sample collected between runoff seep and river.	Shallow, Grab sample 0-3 in.
SS3 Location: GPS – See map.	Cover 0-3 in.	Wet bare soil. Wet dark brown clayey soil with some fine to medium grained sand mixed with some roots. Note: Sample collected from wet seep about 10 ft before seep flows into river.	Shallow, grab sample 0-3 in.
SS4 Location: GPS – See ap.	Cover 0-3in.	Twigs and pieces of glass. Dark brown, dry, clayey soil mixed with some fine to medium grained sand, roots and some glass. Note: Sample collected in area of broken glass, just above river.	Shallow, grab sample 0-3 in.
S5 Location: GPS – See map.	Cover 0-3 in.	Twigs. Dark brown, dry clayey soil with fine to medium grained sand with some roots.	Shallow, grab sample 0-3 in.
SS6 Location: GPS – See map.	Cover 0-3 in.	Leaves and twigs. Dark brown to gray wet clayey soil mixed with fine to medium grained sand and roots, some small stones. Note: Sample collected in flat area with standing water. Scattered trash around the sample location.	Shallow, grab sample 0-3 in.
SS7 Location: GPS – See map.	Cover 0-3 in.	Leaves, wigs, trash and glass. Dry, dark brown clayey soil mixed with fine to medium grained sand, some roots. Note: Sample collected from dry runoff with lots of exposed trash.	Shallow, grab sample 0-3 in.

TABLE 1 (cont.)

SURFICIAL SOIL SAMPLE DESCRIPTIONS

SAMPLE #	DEPTH	DESCRIPTION	DESIGNATION
SS8 Location: GPS – See map.	Cover 0-3 in.	Bare soil. Wet dark-brown to black clayey soil with trace of fine to medium grained sand; red staining only on top crust of the soil. Note: Sample collected from wall of drainage ditch with running water bellow SS18 location. Some red sliming is draining in and just above sample location.	Shallow, grab sample 0-3 in.
SS9 Location: GPS – See map.	Cover 0-3 in.	Dead leaves. Black, very moist clayey soil with some fine grained sand. Note: Sample collected from side of drainage ditch above water level.	Shallow, grab sample 0-3 in.
SS10 Location: GPS – See map.	Cover 0-3 in.	Dry, dark brown clayey soil with fine to medium grained sand, some wood chips. Note: Sample collected near juncture of large gully and river by rusted 55-gallon drum.	Shallow, grab sample 0-3 in.
SS11 Location: GPS – See map.	Cover 0-3 in.	Twigs. Dry, dark brown clayey soil with fine to medium grained sand, some root sand gravel and trace of glass shards. Note: Sample collected from runoff gully half way between building and river.	Shallow, grab sample 0-3 in.
SS12 Location: GPS – See map.	Cover 0-3 in.	Twigs, broken glass. Dark brown, clayey soil, clumpy with fine to medium grained sand, roots. Note: Sample collected from exposed trash area along the slope from below building with fence. Trash included broken glass, metal bed spring, dead lamp light bulbs.	Shallow, grab sample 0-3 in.
SS13A Location: GPS – See map.	Cover 0-3 in.	Twigs, glass shards. Dry, dark brown, clayey soil with fine to medium grained sand, with roots and glass shards. Note: Sample collected form dry gully below building two, gully full of trash, bottles, bricks and twigs.	Shallow, grab sample 0-3 in.

TABLE 1 (cont.)

SURFICIAL SOIL SAMPLE DESCRIPTIONS

SAMPLE #	DEPTH	DESCRIPTION	DESIGNATION
SS13B Location: GPS – See map.	Cover 0-3 in.	Glass shards and twigs. Dark brown, dry clayey soil with some fine to medium grained sand, gravel and glass shards. Note: Sample collected on steep slope in trash exposure/erosion below building.	Shallow, grab sample 0-3 in.
SS14 Location: GPS – See map.	Cover 0-3 in.	Dead leaves, broken glass. Dry, dark brown clayey soil mixed with some sand, stones, glass shards and roots.	Shallow, grab sample 0-3 in.
SS15 Location: GPS – See map.	Cover 0-3 in.	Twigs and dead leaves. Dry and clumpy light brown clayey soil with fine to medium sand with small roots. Note: Sample collected near storm drain and bridge near river.	Shallow, grab sample 0-3 in.
SS16 Location: GPS – See map.	Cover 0-3 in.	Twigs, dead leaves and broken glass. Dry, dark brown clayey soil mixed with fine to medium grained sand, some rocks and glass shards. Note: Sample collected on steep slope back below building.	Shallow, grab sample 0-3 in.
SS17 Location: GPS – See map.	Cover 0-3 in.	Bare ground. Dry, dark brown clayey soil mixed with fine to medium grained sand with some roots. Note: Sample collected at top of slope below building with piled underblock, patio stones, concrete nearby. Large outfall opening.	Shallow, grab sample 0-3 in.
SS18 Location: GPS – See map.	Cover 0-3 in.	Bare soil. Dry, dark brown sandy soil mixed with large amount of gravel. Note: Sample collected beneath outfall pipe south of building along top of slope.	Shallow, grab sample 0-3 in.
SS20 Location: GPS – See map.	Cover 0-3 in.	Dead leaves, twigs. Dry, dark brown clayey soil mixed with some fine to medium grained sand. Note: Sample collected at top of slope before building; very little trash or debris exposed in the area.	Shallow, grab sample 0-3 in.

APPENDIX A

BFRA PROPERTY PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:1 OF:34
U.S. EPA ID #:

)ATE: 8/24/99

TIME: 11:00

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:

SS1

)ESCRIPTION:
ome scattered broken glass on surface in vicinity of sample location.

DATE:8/24/99

TIME:11:00

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS1

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:2 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 11:05

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS2

DESCRIPTION:
Sample collected between runoff seep and river. Some scattered broken glass in vicinity of sample location.

DATE:8/24/99

TIME:11:05

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS2

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:3 OF:34

U.S. EPA ID #:

DATE: 8/24/99

TIME: 11:10

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS3

DESCRIPTION:
Sample collected from wet seep, 10 feet before seep flows into river.

DATE: 8/24/99

TIME: 11:10

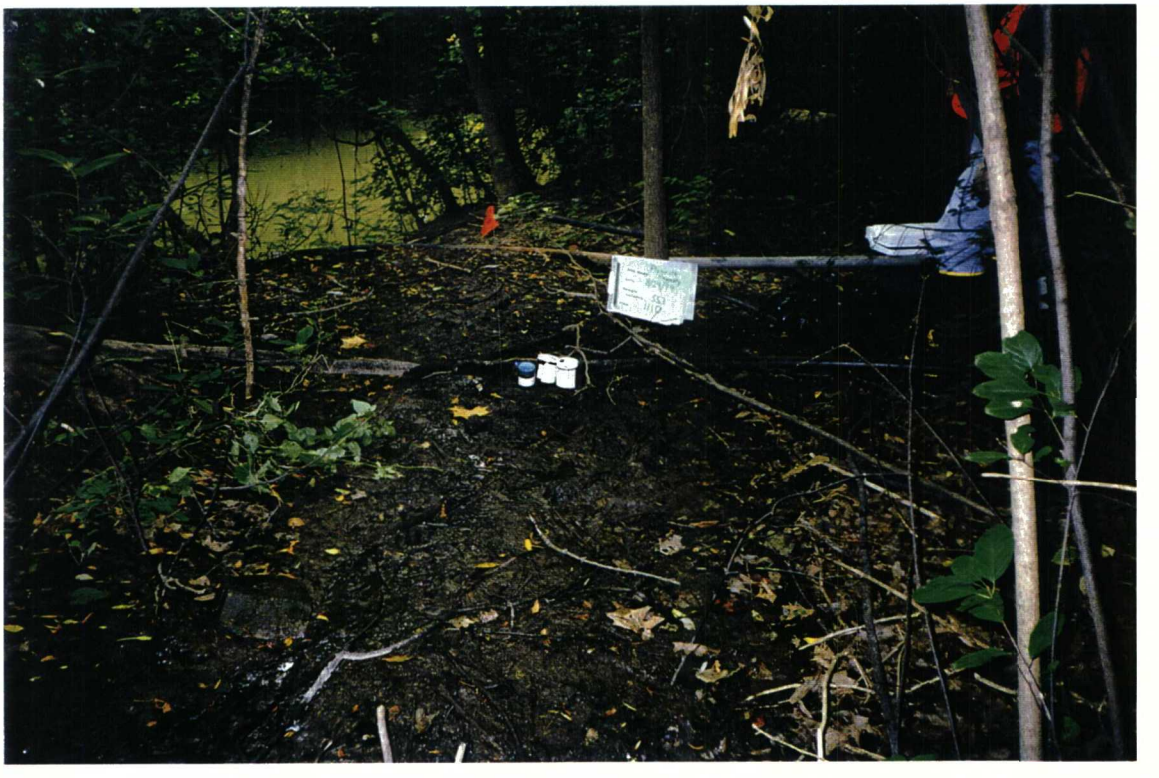
DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS3



DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:4 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 11:15

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Cloudy

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS4

DESCRIPTION:
Sample collected in area of broken glass just above river.

DATE: 8/24/99

TIME: 11:15

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Cloudy

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS4

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:5 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 12:10

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS5

DESCRIPTION:
Sample collected near area of trash, broken glass exposed from soil.

DATE: 8/24/99

TIME: 12:10

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS5

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:6 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 12:25

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS6

DESCRIPTION:
Sample collected in flat area with with standing water and trash around sample area.

DATE: 8/24/99

TIME: 12:25

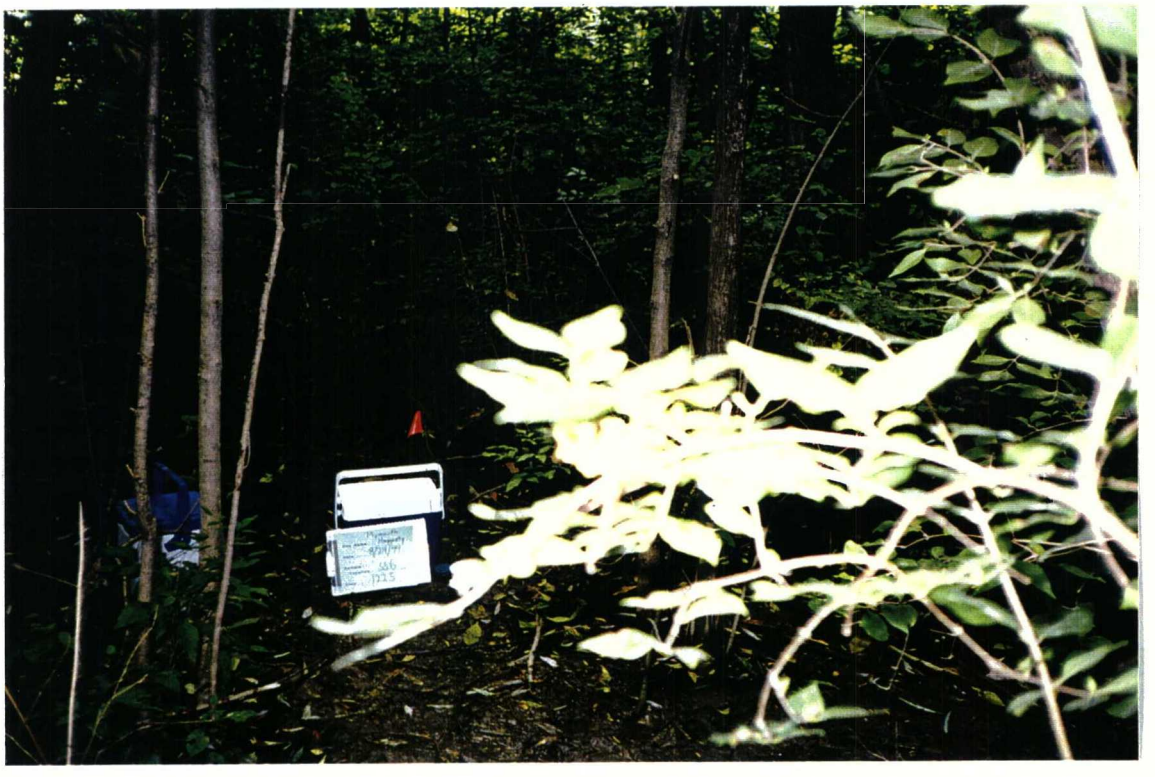
DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS6



DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:7 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 12:35

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS7

DESCRIPTION:
Sample collected from dry runoff with lots of exposed trash.

DATE:8/24/99

TIME:12:35

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS7

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:8 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 15:45

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Cool, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS8

DESCRIPTION:
Sample collected from wall of drainage ditch with running water. Below SS18 location. Some red staining in drainage just above sample location and in sample location.

DATE: 8/24/99

TIME: 15:45

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Cool, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS8

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:9 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 15:55

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Cool, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS9

DESCRIPTION:
Sample collected from side of drainage ditch above water level.

DATE:8/24/99

TIME:15:55

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Cool, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS9

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:10 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 14:55

DIRECTION OF PHOTOGRAPH:
East

WEATHER CONDITIONS:
Overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS10

DESCRIPTION:
Sample collected near large gulley and by rusted 55 gallon drum.

DATE: 8/24/99

TIME: 14:55

DIRECTION OF PHOTOGRAPH:
East

WEATHER CONDITIONS:
Overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS10

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:11 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 15:05

DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS11

DESCRIPTION:
Sample collected from runoff gulley half way between building and river.

DATE:8/24/99

TIME:15:05

DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS11

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:12 OF:34

U.S. EPA ID #:

)ATE: 8/24/99

TIME: 12:20

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS12

DESCRIPTION:

Sample collected from exposed trash area along slope face below building with fence. Trash includes broken glass, metal ed springs and dead lamp lights.

DATE: 8/24/99

TIME: 12:20

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS12

DESCRIPTION:

Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:13 OF:34

U.S. EPA ID #:

DATE: 8/24/99

TIME: 13:45

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS13

DESCRIPTION:
Sample collected on steep slope in trash exposure and erosion below building.

DATE: 8/24/99

TIME: 13:45

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS13

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:14 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 13:25

DIRECTION OF PHOTOGRAPH:
East

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS14

DESCRIPTION:
Sample collected on steep slope in trash exposure and erosion area below building.

DATE:8/24/99

TIME:13:25

DIRECTION OF PHOTOGRAPH:
East

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS14

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:15 OF:34

U.S. EPA ID #:

DATE: 8/24/99

TIME: 13:10

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS15

DESCRIPTION:
Sample collected near drain and bridge over river. Some bottles and glass scattered about immediate area.

DATE: 8/24/99

TIME: 13:10

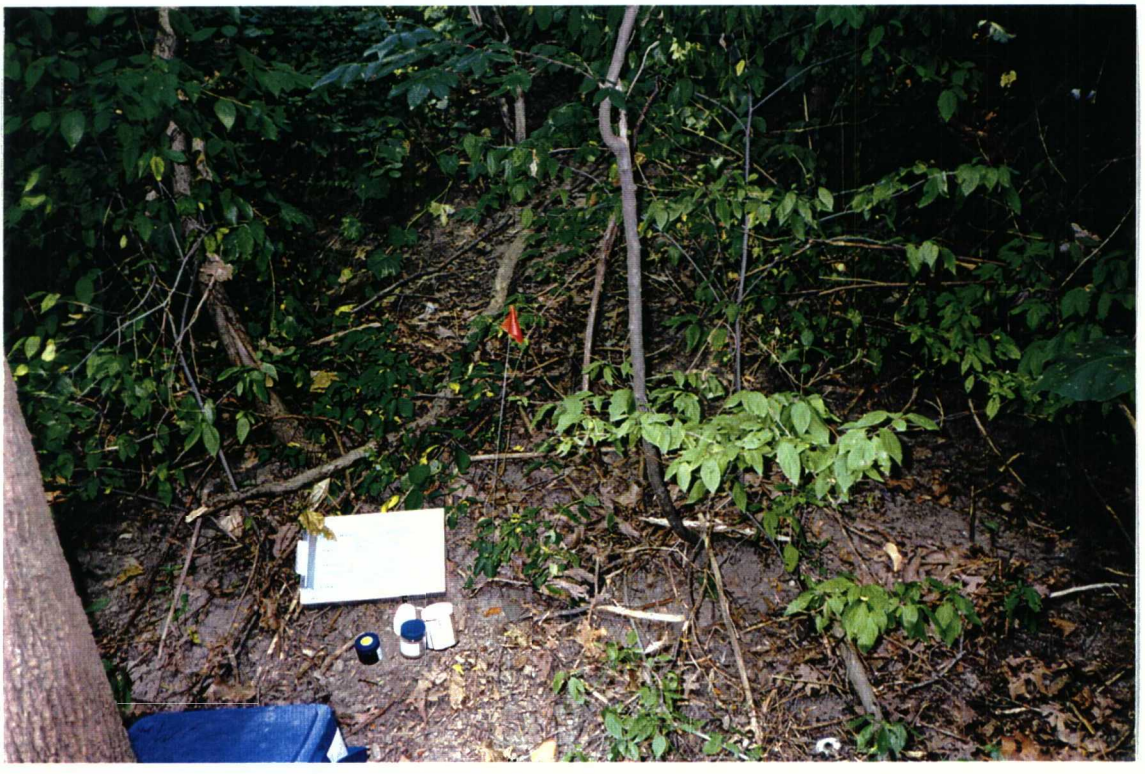
DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS15



DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:16 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 14:10

DIRECTION OF PHOTOGRAPH:
Northeast

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS16

DESCRIPTION:
Sample collected on steep slope base, below building.

DATE: 8/24/99

TIME: 14:10

DIRECTION OF PHOTOGRAPH:
Northeast

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS16

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:17 OF:37

U.S. EPA ID #:

DATE: 8/24/99

TIME: 15:25

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS17

DESCRIPTION:
Sample collected at top of slope below building with piles of bricks, patio stone and concrete nearby.

DATE: 8/24/99

TIME: 15:25

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS17

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:18 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 15:35

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS18

DESCRIPTION:
Sample collected beneath outfall pipe south of building along top of slope.

DATE: 8/24/99

TIME: 15:35

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS18

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:19 OF:34

U.S. EPA ID #:

DATE: 8/24/99

TIME: 14:00

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS19

DESCRIPTION:
Sample collected from dry gulley below building. Gulley full of trash, bottle and bricks.

DATE: 8/24/99

TIME: 14:00

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY: Fairbanks

SAMPLE ID: SS19

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:20 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 15:15

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS20

DESCRIPTION:
Sample collected from along top of slope below building. Very little trash and debris exposed in area.

DATE: 8/24/99

TIME: 15:15

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Warm, overcast

TEMPERATURE:

PHOTOGRAPH BY:
Fairbanks

SAMPLE ID:
SS20

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:21 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 15:55

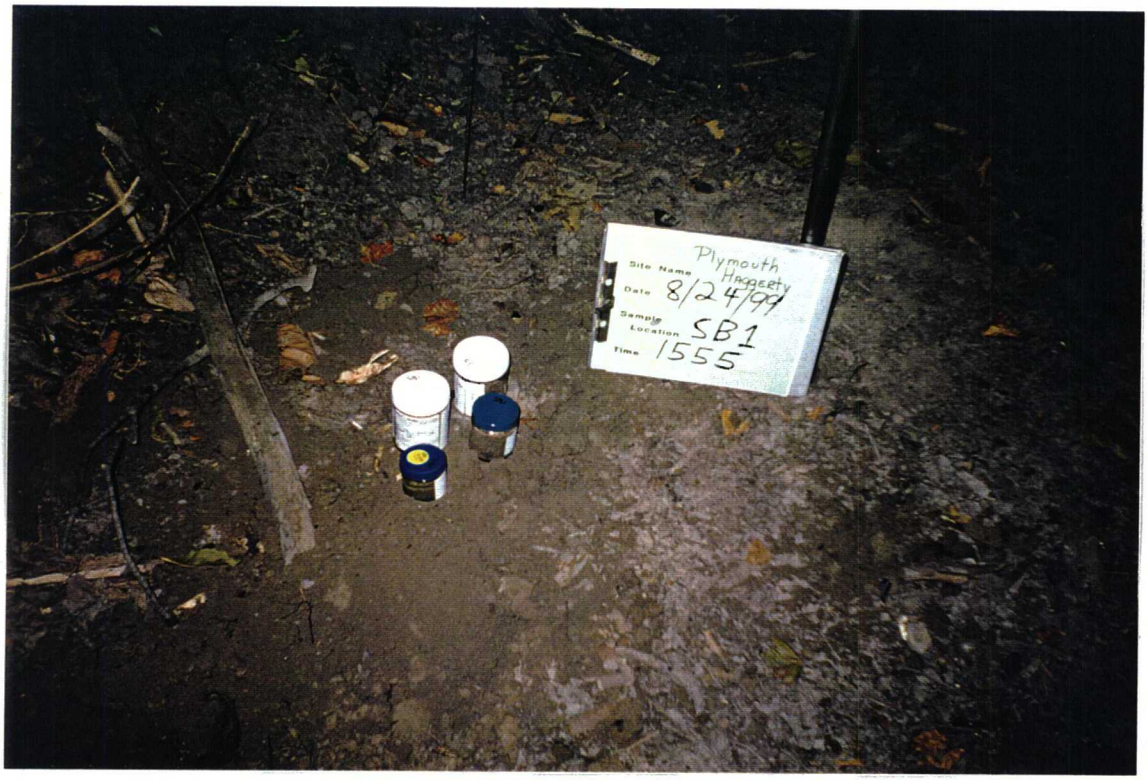
DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS:
Overcast, rain

TEMPERATURE:

PHOTOGRAPH BY:
Carpenter

SAMPLE ID:
SB1



DESCRIPTION:
Sample collected near outwash channel from ballfields. 50 feet from river.

DATE:8/24/99

TIME:15:55

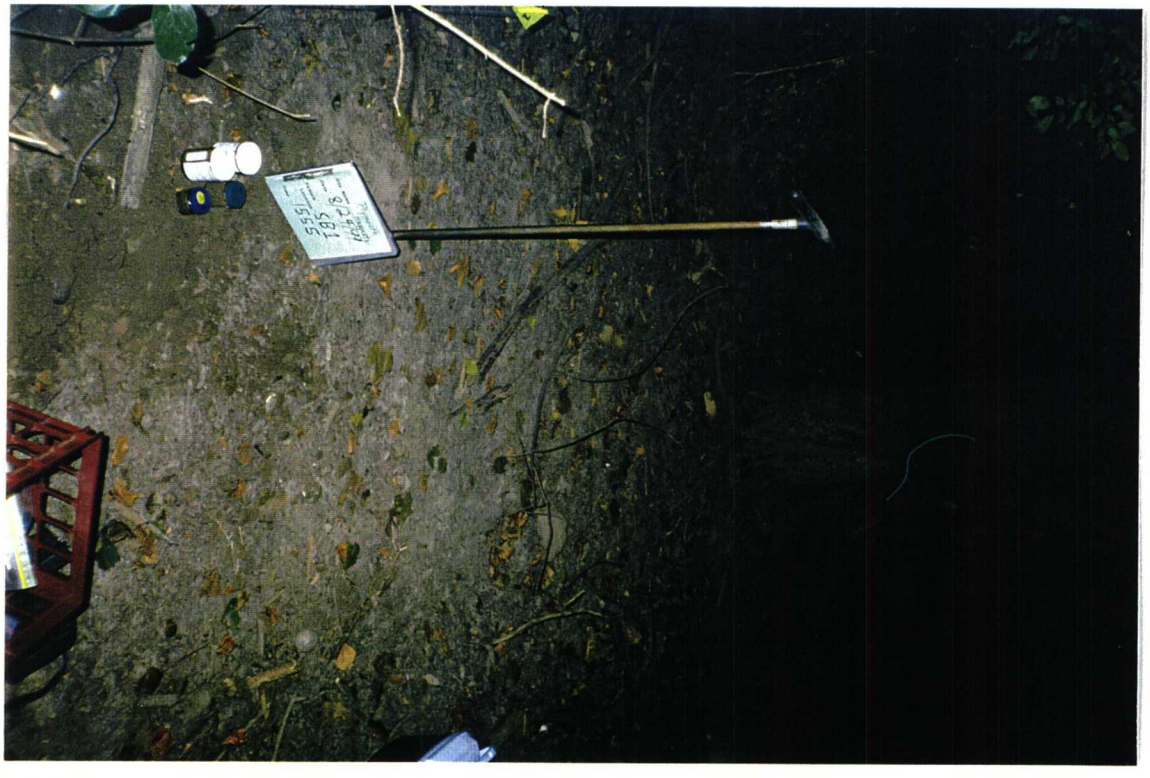
DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS:
Overcast, rain

TEMPERATURE:

PHOTOGRAPH BY:
Carpenter

SAMPLE ID:
SB1



DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:22 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 15:35

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Overcast, light rain

TEMPERATURE:

PHOTOGRAPH BY:
Carpenter

SAMPLE ID:
SB2

DESCRIPTION:

DATE: 8/24/99

TIME: 15:35

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Overcast, light rain

TEMPERATURE:

PHOTOGRAPH BY:
Carpenter

SAMPLE ID:
SB2

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:23 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 15:20

DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS:
Overcast, light rain

TEMPERATURE:

PHOTOGRAPH BY:
Carpenter

SAMPLE ID:
SB3

DESCRIPTION:

DATE:8/24/99

TIME:15:20

DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS:
Overcast, light rain

TEMPERATURE:

PHOTOGRAPH BY:
Carpenter

SAMPLE ID:
SB3

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:24 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 12:10

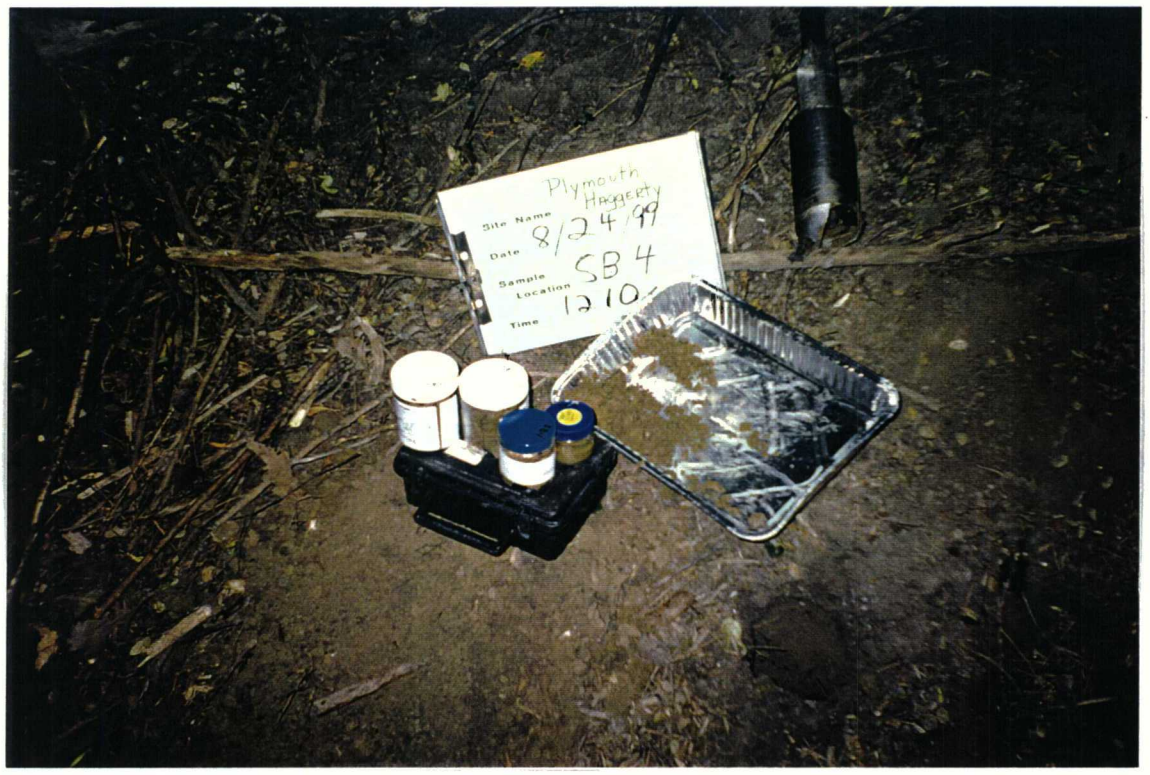
DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Overcast

TEMPERATURE:

PHOTOGRAPH BY: Carpenter

SAMPLE ID: SB4



DESCRIPTION:
Sample collected by surface wash flanked by trash, including flower pots and glass.

DATE: 8/24/99

TIME: 12:10

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Overcast

TEMPERATURE:

PHOTOGRAPH BY: Carpenter

SAMPLE ID: SB4

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:25 OF:34

U.S. EPA ID #:

DATE: 8/24/99

TIME: 10:45

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Overcast, light rain

TEMPERATURE:

PHOTOGRAPH BY: Carpenter

SAMPLE ID: SB5

DESCRIPTION: Sample collected near concrete and other debris.

DATE: 8/24/99

TIME: 10:45

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Overcast, light rain

TEMPERATURE:

PHOTOGRAPH BY: Carpenter

SAMPLE ID: SB5

DESCRIPTION: Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:26 OF:34

U.S. EPA ID #:

DATE: 8/24/99

TIME: 11:40

DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS: Overcast

TEMPERATURE: 75 F

PHOTOGRAPH BY: Henry

SAMPLE ID: SB6

DESCRIPTION: Sample collected near some surficial glass.

DATE: 8/24/99

TIME: 11:40

DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS: Overcast

TEMPERATURE: 75 F

PHOTOGRAPH BY: Henry

SAMPLE ID: SB6

DESCRIPTION: Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:27 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 10:00

DIRECTION OF PHOTOGRAPH:
East

WEATHER CONDITIONS:
Overcast

TEMPERATURE:

PHOTOGRAPH BY:
Carpenter

SAMPLE ID:
SB7

DESCRIPTION:
Sample collected at bottom of steep hill, 30 feet from river. No grass or soil cover.

DATE: 8/24/99

TIME: 10:00

DIRECTION OF PHOTOGRAPH:
East

WEATHER CONDITIONS:
Overcast

TEMPERATURE:

PHOTOGRAPH BY:
Carpenter

SAMPLE ID:
SB7

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:28 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 14:30

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Overcast, calm

TEMPERATURE:
75 F

PHOTOGRAPH BY:
Henry

SAMPLE ID:
SB8

DESCRIPTION:

DATE: 8/24/99

TIME: 14:30

DIRECTION OF PHOTOGRAPH:
North

WEATHER CONDITIONS:
Overcast, calm

TEMPERATURE:
75 F

PHOTOGRAPH BY:
Henry

SAMPLE ID:
SB8

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:29 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 14:15

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Overcast

TEMPERATURE:

PHOTOGRAPH BY: Carpenter

SAMPLE ID: SB9

DESCRIPTION:
Sample collected near debris including broken bottles, cinder blocks and drainage tile.

DATE: 8/24/99

TIME: 14:15

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Overcast

TEMPERATURE:

PHOTOGRAPH BY: Carpenter

SAMPLE ID: SB9

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:30 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 14:35

DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS:
Overcast

TEMPERATURE:
75 F

PHOTOGRAPH BY:
Henry

SAMPLE ID:
SB10

DESCRIPTION:

DATE:8/24/99

TIME:14:35

DIRECTION OF PHOTOGRAPH:

WEATHER CONDITIONS:
Overcast

TEMPERATURE:
75 F

PHOTOGRAPH BY:
Henry

SAMPLE ID:
SB10

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:31 OF:34

U.S. EPA ID #:

DATE: 8/24/99

TIME: 11:30

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Partly sunny

TEMPERATURE: 75 F

PHOTOGRAPH BY: Walczak

SAMPLE ID: SW/SD1

DESCRIPTION:
Sample collected in same ravine as SW/SD2, just downstream further.

DATE: 8/24/99

TIME: 11:30

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Partly sunny

TEMPERATURE: 75 F

PHOTOGRAPH BY: Walczak

SAMPLE ID: SW/SD1

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:32 OF:34

U.S. EPA ID #:

DATE: 8/24/99

TIME: 10:50

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Cloudy, rainy

TEMPERATURE:

PHOTOGRAPH BY: Spielberg

SAMPLE ID: SW/SD2

DESCRIPTION:
Sample collected in ravine south of building.

DATE: 8/24/99

TIME: 10:50

DIRECTION OF PHOTOGRAPH: North

WEATHER CONDITIONS: Cl;oudy, rainy

TEMPERATURE:

PHOTOGRAPH BY: Spielberg

SAMPLE ID: SW/SD2

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:33 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 13:35

DIRECTION OF PHOTOGRAPH: Northeast

WEATHER CONDITIONS: Cloudy

TEMPERATURE: 70 F

PHOTOGRAPH BY: Spielberg

SAMPLE ID: SW/SD3

DESCRIPTION:
Sample collected above ravine and below building.

DATE: 8/24/99

TIME: 13:35

DIRECTION OF PHOTOGRAPH: Northeast

WEATHER CONDITIONS: Cloudy

TEMPERATURE: 70 F

PHOTOGRAPH BY: Spielberg

SAMPLE ID: SW/SD3

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: **Plymouth Haggerty** PAGE:34 OF:34
U.S. EPA ID #:

DATE: 8/24/99

TIME: 15:10

DIRECTION OF PHOTOGRAPH:
Northwest

WEATHER CONDITIONS:
Cloudy

TEMPERATURE:
75 F

PHOTOGRAPH BY:
Walczak

SAMPLE ID:
SW/SD4

DESCRIPTION:
Sample collected near eastern most ravine in seep.

DATE:8/24/99

TIME:15:10

DIRECTION OF PHOTOGRAPH:
Northwest

WEATHER CONDITIONS:
Cloudy

TEMPERATURE:
75 F

PHOTOGRAPH BY:
Walczak

SAMPLE ID:
SW/SD4

DESCRIPTION:
Long view of sample location.

Results of the Michigan Department of Community Health will be submitted at a later date.

APPENDIX B

MDCH HEALTH CONSULTATION REPORT

Results of the Michigan Department of Community Health will be submitted at a later date.

APPENDIX C

CHEMICAL ANALYSIS OF BFRA DATA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: _____

SUBJECT: Review of Data
Received for Review on October 4, 1999

FROM: Stephen L. Ostrodka, Chief (SRT-4J)
Superfund Technical Support Section

for Steve Ostrodka
Richard L Byrnes
11/5/99

TO: Data User: MDEQ

We have reviewed the data for the following case:

SITE NAME: Plymouth/Haggerty (MI)

CASE NUMBER: 27323 SDG NUMBER: EAGR3

mber and Type of Samples: 20 soil

Sample Numbers: EAGR3-6, EAHZ3-8, EAJE6-7, EAJM8-9, EAMJ8-9, EAMKO, EARJ5-7

Laboratory: SWOK Hrs. for Review: 17+1.5 WL

Following are our findings:

The data are usable and acceptable with the qualifications described in the attached narrative.

Richard L Byrnes

CC: Cecilia Moore
Region 5 TPO
Mail Code: SM-5J

Case Number :27323 **SDG Number:EAGR3**
Site Name: Plymouth/Haggerty(MI) **Laboratory:**SWOK

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty soil samples numbered EAGR3-6, EAHZ3-8, EAJE6-7, EAJM8-9, EAMJ8-9, EAMKO, EARJ5-7 were collected on August 24th, 1999. The lab received the samples on August 25th, 1999 in good condition. All samples were analyzed for the full list of organic semivolatile and pesticide/PCB analytes. All were analyzed according to CLP SOW OLM03.2 3/90.

Reviewed By: M. Kaminsky Lockheed-Martin/ESAT
Date: October 27, 1999

Case Number :27323 SDG Number:EAGR3
te Name: Plymouth/Haggerty(MI) Laboratory:SWOK

1. HOLDING TIME

The following pesticide soil samples are outside primary extraction holding time criteria.
Hits are qualified "J" and non-detects are qualified "UJ".

EAJM8, EAJM8DL

2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

The following pesticide samples are associated with a continuing PEM in which the RPD between the nominal and calculated amounts for a PEM compound is outside criteria.
Hits are qualified "J" and non-detects are qualified "UJ".

EAGR3, EAGR6, EAHZ4, EAHZ5, EAHZ6, EAHZ8, EAJM7, EAJM7MS, EAJM7MSD, EAMJ8, EAMJ9, EARJ5, EARJ6
4,4'-DDT, Methoxychlor

The following pesticide samples are associated with a continuing PEM in which the DDT % breakdown exceeds criteria.
DDT detected in associated samples is qualified "J".

EAGR6, EAHZ4, EAHZ5, EAHZ6, EAHZ8, EAJM7, EAJM7MS, EAJM7MSD, EAMJ8, EAMJ9 EARJ5, EARJ6

The following pesticide samples are associated with a continuing PEM in which the DDT % breakdown exceeds criteria. DDD and/or DDE was detected in the sample, but DDT was not detected.
Non-detect DDT in associated samples is qualified "R".

EAGR3

The following pesticide samples are associated with a continuing PEM in which the DDT % breakdown exceeds criteria.
DDD and DDE detected in associated samples are qualified "J".

EAGR6, EAHZ4, EAHZ5, EAHZ6, EAHZ8, EAJM7, EAJM7MS, EAJM7MSD, EAMJ8, EAMJ9, EARJ5, EARJ6

3. CALIBRATION

The following semivolatile samples are associated with a continuing calibration whose corresponding initial calibration has relative response factors (RRFs) outside primary criteria.
Hits are flagged "J" and non-detects are qualified "R".

2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol
EAHZ7, EAHZ7RE, EAHZ8, EAJM7, EAJM7MS, EAJM7MSD, EAJM8, EAJM8RE, EAJM9,

Reviewed By: M. Kaminsky Lockheed-Martin/ESAT
Date: October 27, 1999

Case Number :27323 **SDG Number:EAGR3**
Site Name: Plymouth/Haggerty(MI) **Laboratory:SWOK**

SBLK2

The following semivolatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria.
Hits are qualified "J" and non-detects are qualified "UJ".

bis(2-Chloroethyl)ether, Hexachlorobutadiene, 2-Nitroaniline
EAGR3DL, EAGR6, EAHZ3, EAHZ4, EAHZ5, EAMJ8, EAMJ9, EAMK0, EARJ5, EARJ6, EARJ7

2,2'-oxybis(1-Chloropropane), N-Nitroso-di-n-propylamine
EAGR3DL, EAGR6, EAHZ3, EAHZ4, EAHZ5, EAHZ6, EAJE6, EAMJ8, EAMJ9, EAMK0, EARJ5, EARJ6, EARJ7

Hexachlorocyclopentadiene, Butylbenzylphthalate,
bis(2-Ethylhexyl)phthalate
EAHZ7, EAJM8

2,6-Dinitrotoluene, 3,3'-Dichlorobenzidine
EAHZ7, EAHZ7RE, EAHZ8, EAJM7, EAJM7MS, EAJM7MSD, EAJM8, EAJM8RE, EAJM9, SBLK2

2,4-Dinitrophenol, Chrysene, Benzo(b)fluoranthene
EAHZ6, EAJE6

Di-n-octylphthalate
EAHZ6, EAHZ7, EAJE6, EAJM8

The RPD between the nominal and the calculated amount of an analyte in the midpoint INDA/INDB exceeded criteria.
Hits are qualified "J" and non-detects are qualified "UJ".

EAHZ3, EAHZ7, EAJE6, EAMK0, EARJ7
4,4'-DDT, Methoxychlor

4. BLANKS

The blank associated with the following sample was qualified "R" during a previous qualification. Hits and non-detects are not flagged. However, if the nondetects were flagged as "R" under another qualification, then the "R" flag is the final flag.

EAHZ5DL, EAHZ6, EAHZ7, EAHZ7RE, EAHZ8, EAHZ8DL, EAJM7, EAJM7MS, EAJM7MSD, EAJM8, EAJM8RE, EAJM9, EAJE6
2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol

se Number :27323 **SDG Number:EAGR3**
Site Name: Plymouth/Haggerty(MI) **Laboratory:**SWOK

The following semivolatile samples have analyte concentrations reported above the CRQL and less than or equal to ten times (10X) the associated method blank concentration.
Hits are qualified "U" and non-detects are not flagged.

EAGR3, EAGR5, EAGR6, EAHZ3, EAHZ5, EARJ6
bis(2-Ethylhexyl)phthalate

The following semivolatile samples have analyte concentrations reported below the CRQL and less than or equal to five times (5X) the associated method blank concentration. Reported sample concentrations have been elevated to the CRQL.
Hits are flagged "U" and non-detects are not flagged.

EAGR3, EAGR3DL, EAGR4, EAGR5, EAGR6, EAHZ3, EAHZ4, EAHZ5, EAMJ8, EAMJ9, EAMK0, EARJ5, EARJ6, EARJ7
1,4-Dichlorobenzene

The following semivolatile samples have analyte concentrations reported below the CRQL and less than or equal to ten times (10X) the associated method blank concentration. Reported sample concentrations have been elevated to the CRQL.
Hits are qualified "U" and non-detects are not flagged.

bis(2-Ethylhexyl)phthalate
EAGR3DL, EAGR4, EAHZ4, EAHZ6, EAHZ7, EAHZ7RE, EAHZ8DL, EAJE6, EAJM7, EAJM7MS, EAJM7MSD, EAJM8, EAJM8RE, EAJM9, EAMJ8, EAMJ9, EAMK0, EARJ5, EARJ7

5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The following pesticide samples have surrogate percent recoveries which exceed the upper limit of the criteria window.
Hits are qualified "J" and non-detects are not flagged.

EAHZ8, EAJM7, EAJM7MS, EAMJ8, EARJ5

The following diluted pesticide samples have high surrogate percent recoveries but were diluted at least 5x. No qualification of the data is needed.

EAGR3, EAHZ4DL, EAHZ5DL, EAJM8DL, EAMJ9DL, EARJ5DL

The following diluted pesticide samples have low surrogate percent recoveries but were diluted at least 5x. No qualification of the data is needed.

EAGR3DL, EAHZ4DL, EAHZ5DL, EAHZ6DL, EAHZ8DL, EARJ5DL, EARJ7DL

Case Number :27323 **SDG Number:EAGR3**
Site Name: Plymouth/Haggerty(MI) **Laboratory:**SWOK

The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

EAGR3
Naphthalene, Acenaphthylene, Acenaphthene, Dibenzofuran, Fluorene, Anthracene, Carbazole, Di-n-butylphthalate

EAGR3DL
Acenaphthylene, Acenaphthene, Dibenzofuran, Fluorene, Anthracene, Carbazole, Dibenz(a,h)anthracene

EAGR4
Acenaphthene, Fluorene, Phenanthrene, Anthracene, Carbazole, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Di-n-octylphthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EAGR5
Phenanthrene, Fluoranthene, Pyrene, Chrysene, Benzo(a)pyrene, Benzo(g,h,i)perylene

EAGR6, EAHZ3, EAHZ4
Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EAHZ5
2-Methylphenol, 4-Methylphenol, Fluorene, Anthracene, Carbazole, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EAHZ5DL
Anthracene, Carbazole, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EAHZ6
1,4-Dichlorobenzene, Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EAHZ7, EAHZ7RE

Reviewed By: M. Kaminsky Lockheed-Martin/ESAT
Date: October 27, 1999

Case Number :27323 **SDG Number:EAGR3**
Site Name: Plymouth/Haggerty(MI) **Laboratory:SWOK**

1,4-Dichlorobenzene, Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

EAHZ8
Acenaphthylene, Acenaphthene, Dibenzofuran, Fluorene, Anthracene, Di-n-butylphthalate

EAHZ8DL
Acenaphthylene, Acenaphthene, Dibenzofuran, Fluorene, Anthracene, Carbazole, Dibenz(a,h)anthracene

EAJE6
1,4-Dichlorobenzene, Di-n-butylphthalate, Di-n-octylphthalate

EAJM7
1,4-Dichlorobenzene, 2-Methylnaphthalene, Acenaphthene, Dibenzofuran, Fluorene, Anthracene, Carbazole, Di-n-butylphthalate, Di-n-octylphthalate Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EAJM7MS
Naphthalene, 2-Methylnaphthalene, Dibenzofuran, Fluorene, Pentachlorophenol, Anthracene, Carbazole, Di-n-butylphthalate, Di-n-octylphthalate, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EAJM7MSD
Fluorene, Phenanthrene, Anthracene, Carbazole, Di-n-butylphthalate, Benzo(a)anthracene, Chrysene, Di-n-octylphthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EAJM8
1,4-Dichlorobenzene, Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EAJM8RE
2-Chlorophenol, 1,4-Dichlorobenzene, 4-Chloro-3-methylphenol, Acenaphthene, Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Di-n-octylphthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

Reviewed By: M. Kaminsky Lockheed-Martin/ESAT
Date: October 27, 1999

Case Number :27323 **SDG Number:EAGR3**
Site Name: Plymouth/Haggerty(MI) **Laboratory:SWOK**

EAJM9
1,4-Dichlorobenzene, Benzo(a)pyrene

EAMJ8
Acenaphthylene, Acenaphthene, Dibenzofuran, Fluorene, Anthracene, Carbazole, Di-n-butylphthalate, Dibenz(a,h)anthracene

EAMJ9
Phenol, Acenaphthylene, Acenaphthene, Dibenzofuran, Fluorene, Anthracene, Carbazole, Di-n-butylphthalate, Dibenz(a,h)anthracene

EAMK0
Acenaphthene, Fluorene, Phenanthrene, Anthracene, Carbazole, Di-n-butylphthalate, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EARJ5
Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Dibenzofuran, Fluorene, Anthracene, Carbazole, Di-n-butylphthalate, Dibenz(a,h)anthracene

EARJ6
4-Methylphenol, Acenaphthylene, Phenanthrene, Anthracene, Carbazole, Di-n-butylphthalate, Benzo(a)anthracene, Chrysene, Di-n-octylphthalate, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EARJ7
Phenanthrene, Anthracene, Carbazole, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

SBLK1
1,4-Dichlorobenzene, bis(2-Ethylhexyl)phthalate

SBLK2
bis(2-Ethylhexyl)phthalate

The following pesticide samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

EAGR3
4,4'-DDE, gamma-Chlordane

Reviewed By: M. Kaminsky Lockheed-Martin/ESAT
Date: October 27, 1999

Case Number :27323 **SDG Number:EAGR3**
Site Name: Plymouth/Haggerty(MI) **Laboratory:**SWOK

EAGR4
Heptachlor, 4,4'-DDD, 4,4'-DDT, alpha-Chlordane, gamma-Chlordane

EAGR5
Heptachlor, gamma-Chlordane

EAGR6
Aldrin, Heptachlor epoxide, 4,4'-DDD

EAGR6DL
4,4'-DDE, 4,4'-DDT

EAHZ3
Aldrin

EAHZ3DL, EAHZ4DL, EAHZ6DL, EAJM8DL
4,4'-DDD

EAHZ5
Endrin ketone

EAHZ5DL
Aldrin, Heptachlor epoxide, 4,4'-DDE, 4,4'-DDT

EAHZ6
Methoxychlor

EAHZ7
Dieldrin

EAHZ8DL
4,4'-DDE

EAJE6
Heptachlor, 4,4'-DDD

EAJE6DL
4,4'-DDE, 4,4'-DDT

EAJM7
Heptachlor, Endosulfan sulfate, 4,4'-DDT, Endrin ketone

EAJM7DL
4,4'-DDE, 4,4'-DDD, 4,4'-DDT

EAJM7MS
Endosulfan sulfate

Reviewed By: M. Kaminsky Lockheed-Martin/ESAT
Date: October 27, 1999

Case Number :27323 **SDG Number:EAGR3**
Site Name: Plymouth/Haggerty(MI) **Laboratory:**SWOK

EAJM8
Dieldrin, Methoxychlor

EAJM9
alpha-Chlordane, gamma-Chlordane

EAMJ8
alpha-BHC, Endosulfan II

EAMJ8DL
gamma-BHC (Lindane), Heptachlor, Aldrin, Dieldrin, 4,4'-DDE, Endrin, 4,4'-DDD, 4,4'-DDT

EAMJ9DL
Heptachlor epoxide, 4,4'-DDD, 4,4'-DDT

EAMK0
Endosulfan II

EAMK0DL
Endosulfan II, 4,4'-DDD

EARJ5
Heptachlor epoxide, Endosulfan II, Endrin aldehyde, gamma-Chlordane

EARJ5DL
Heptachlor, 4,4'-DDE

EARJ6
Endrin aldehyde

EARJ6DL
4,4'-DDD, alpha-Chlordane

EARJ7
Methoxychlor, Endrin aldehyde

EARJ7DL
4,4'-DDT

The following pesticide samples have analytes for which the percent difference between column results exceeds primary criteria. Positive hits are flagged "J".

EAGR3
4,4'-DDE

Reviewed By: M. Kaminsky Lockheed-Martin/ESAT
Date: October 27, 1999

Case Number :27323 **SDG Number:EAGR3**
Site Name: Plymouth/Haggerty(MI) **Laboratory:**SWOK

EAGR4
Heptachlor, alpha-Chlordane

EAGR5
Heptachlor, 4,4'-DDT, alpha-Chlordane, gamma-Chlordane

EAGR6
Aldrin, Heptachlor epoxide

EAGR6DL
Heptachlor, 4,4'-DDT

EAHZ3
Heptachlor, 4,4'-DDE

EAHZ4, EAJM8DL
4,4'-DDD

EAHZ5
Aldrin, Heptachlor epoxide, 4,4'-DDE, Endrin ketone, Endrin aldehyde, gamma-Chlordane

EAHZ5DL
Aldrin, 4,4'-DDE, 4,4'-DDT

EAHZ6
delta-BHC, Heptachlor, 4,4'-DDE, 4,4'-DDT, Methoxychlor

EAHZ7
Heptachlor, Dieldrin

EAHZ8
Endrin, 4,4'-DDD, 4,4'-DDT, Methoxychlor, Endrin aldehyde

EAJE6
4,4'-DDD, 4,4'-DDT

EAJE6DL
4,4'-DDE, 4,4'-DDT

EAJM7
4,4'-DDT, Endrin ketone

EAJM7DL, EAJM7MS, EARJ7DL
4,4'-DDT

EAJM7MSD, EAMJ8DL

Reviewed By: M. Kaminsky Lockheed-Martin/ESAT
Date: October 27, 1999

Case Number :27323 **SDG Number:EAGR3**
Site Name: Plymouth/Haggerty(MI) **Laboratory:**SWOK

Aldrin

EAJM8
Dieldrin, Methoxychlor

EAJM9
Heptachlor, alpha-Chlordane

EAMJ8
alpha-BHC, Heptachlor, Heptachlor epoxide, Endosulfan II, alpha-Chlordane

EAMJ9
Methoxychlor, alpha-Chlordane

EAMJ9DL
Heptachlor epoxide, 4,4'-DDT, alpha-Chlordane

EAMK0, EAMK0DL
Endosulfan II

EARJ5
Aldrin, Heptachlor epoxide, Endosulfan II, Endrin aldehyde, gamma-Chlordane

EARJ6
4,4'-DDE, Endrin aldehyde, alpha-Chlordane, gamma-Chlordane

EARJ6DL
alpha-Chlordane

EARJ7
4,4'-DDD, 4,4'-DDT, Endrin aldehyde

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baseline for the pesticide analysis was acceptable.

12. ADDITIONAL INFORMATION

The pH of the soil samples can be found on the CADRE Form I's. Semivolatile sample EAGR3 was found to contain fluoranthene over the calibration range. The value for this compound should be taken from the diluted sample. Semivolatile sample EAHZ5 was found to contain 2-methylnaphthalene over the calibration range. The value for this compour should be taken from the diluted sample. Semivolatile sample EAHZ8 was found to contain fluoranthene and pyrene over the calibration range. The values for these compounds should be taken from the diluted sample.

Reviewed By: M. Kaminsky Lockheed-Martin/ESAT
Date: October 27, 1999

Case Number :27323 **SDG Number:EAGR3**
Site Name: Plymouth/Haggerty(MI) **Laboratory:**SWOK

Pesticide/PCB samples EAHZ4, EAJM8, and EAMK0 were found to contain 4,4'-DDE over the calibration range. The values for this compound should be taken from the diluted samples. Pesticide/PCB samples EAHZ3, EAHZ6, EAHZ7, and EARJ6 were found to contain 4,4'-DDE and 4,4'-DDT over the calibration range. The values for these compounds should be taken from the diluted samples. Pesticide/PCB sample EAHZ5 was found to contain heptachlor epoxide and 4,4'-DDE over the calibration range. The values for these compounds should be taken from the diluted sample. Pesticide/PCB sample EARJ5 was found to contain heptachlor over the calibration range. The value for this compound should be taken from the diluted sample. Pesticide/PCB sample EAMJ8 was found to contain alpha-chlordane and gamma-chlordane over the calibration range. The values for these compounds should be taken from the diluted sample.

Reviewed By: M. Kaminsky Lockheed-Martin/ESAT
Date: October 27, 1999

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The anlayte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
H	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

Semivolatile Analysis Data - SBLK1
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
123-42-2	2-PENTANONE,4-HYDROXY-4-METHYL-	3.48	30000.000	AJN
	UNKNOWN	4.23	310.000	J
	UNKNOWN	4.58	180.000	J
	UNKNOWN	5.88	600.000	J
872-05-9	1-DECENE	10.81	400.000	JN
	UNKNOWNHYDROCARBON	12.81	110.000	J
	UNKNOWNAMIDE	15.08	120.000	J
	UNKNOWNAMIDE	16.43	140.000	J
	UNKNOWNAMIDE	16.54	210.000	J
	UNKNOWNAMIDE	17.75	2900.000	J
	UNKNOWNAMIDE	17.88	140.000	J
	UNKNOWNAMIDE	20.15	340.000	J
	UNKNOWN	21.75	100.000	J
59-02-9	VITAMINE	21.98	180.000	JN
	UNKNOWN	22.23	68.000	J
	UNKNOWN	22.35	140.000	J
	UNKNOWN	22.78	1300.000	J
	UNKNOWN	22.96	220.000	J
	UNKNOWN	23.08	150.000	J
	UNKNOWN	23.15	77.000	J
	UNKNOWN	23.53	85.000	J
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.90	930.000	JN
	UNKNOWNPAH	24.16	98.000	J
	UNKNOWNHYDROCARBON	25.25	500.000	J

FILE NAME: EAGR3.SDG DATE: 09/29/99 TIME: 18:26 CADRE99 PAGE: 1

Semivolatile Analysis Data - EAGR3
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.38	330.000	J
	UNKNOWN	4.58	1800.000	BJ
	UNKNOWN	4.70	290.000	J
57-10-3	HEXADECANOICACID	14.95	770.000	JN
84-65-1	9,10-ANTHRACENEDIONE	15.37	480.000	JN
	UNKNOWNPAH	16.23	380.000	J
238-84-6	11H-BENZO[A]FLUORENE	17.10	380.000	JN
	UNKNOWNPAH	18.31	270.000	J
192-97-2	BENZO[E]PYRENE	20.98	580.000	JN
	UNKNOWNPAH	21.39	300.000	J
77899-10-6	(Z)14-TRICOSENYLFORMATE	22.27	630.000	JN
215-58-7	BENZO[B]TRIPHENYLENE	22.70	360.000	JN
215-58-7	BENZO[B]TRIPHENYLENE	22.74	360.000	JN
83-47-6	.GAMMA.-SITOSTEROL	22.95	1000.000	JN
	UNKNOWNPAH	23.10	430.000	J
	UNKNOWN	23.21	280.000	J
	UNKNOWN	23.32	730.000	J
	UNKNOWN	23.43	490.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.60	980.000	JN
	UNKNOWN	24.04	270.000	J
	UNKNOWN	24.18	730.000	J
	1,2:3,4-DIBENZPYRENE	24.27	410.000	J
192-65-4	NAPHTHO[1,2,3,4-DEF]CHRYSENE	24.44	370.000	JN
191-07-1	CORONENE	24.93	280.000	JN

FILE NAME: EAGR3.SDG DATE: 09/29/99 TIME: 18:26 CADRE99 PAGE: 2

Semivolatile Analysis Data - EAGR4
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
110-13-4	2,5-HEXANEDIONE	4.37	250.000	JN
	UNKNOWN	4.58	1000.000	BJ
	UNKNOWN	4.70	340.000	J
	UNKNOWN	5.33	330.000	J
2091-29-4	9-HEXADECENOICACID	14.82	320.000	JN
57-10-3	HEXADECANOICACID	14.94	540.000	JN
112-80-1	OLEICACID	16.26	370.000	JN
	UNKNOWN	20.36	270.000	J
	UNKNOWN	21.75	140.000	BJ
	UNKNOWN	21.89	280.000	J
	UNKNOWN	22.28	270.000	J
	UNKNOWN	22.68	310.000	J
83-47-6	.GAMMA.-SITOSTEROL	22.94	1400.000	JN
	UNKNOWNPAH	23.11	700.000	J
	UNKNOWN	23.20	890.000	J
	UNKNOWN	23.32	520.000	J
	UNKNOWNKETONE	23.42	310.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.60	690.000	JN
	UNKNOWN	24.04	710.000	J
	UNKNOWN	24.17	1300.000	J

Semivolatile Analysis Data - EAGR5
Tentatively Identified Compounds

CASE NO: 27323
SDG NO: EAGR3

LABORATORY: SWL-TULSA

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
110-13-4	2,5-HEXANEDIONE	4.36	160.000	JN
	UNKNOWN	4.58	1200.000	BJ
	UNKNOWN	4.70	310.000	J
	UNKNOWN	5.33	150.000	J
	UNKNOWN	12.04	99.000	J
502-69-2	2-PENTADECANONE,6,10,14-TRIMETHYL-	14.07	120.000	JN
57-10-3	HEXADECANOICACID	14.94	130.000	JN
	UNKNOWN	15.38	98.000	J
	UNKNOWNAMIDE	15.82	120.000	J
	UNKNOWNORGANICACID	16.52	660.000	J
	UNKNOWN	20.36	170.000	J
	2-PENTACOSANONE	20.78	92.000	J
18435-45-5	1-NONADECENE	21.68	120.000	JN
	UNKNOWN	21.89	99.000	J
	UNKNOWN	21.98	230.000	J
	UNKNOWNALDEHYDE	22.27	140.000	J
	UNKNOWN	22.68	97.000	J
83-47-6	.GAMMA.-SITOSTEROL	22.94	700.000	JN
	UNKNOWNHYDROCARBON	23.09	150.000	J
638-95-9	.ALPHA.-AMYRIN	23.23	310.000	JN
	UNKNOWNPAH	23.46	90.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.59	220.000	JN

Semivolatile Analysis Data - EAGR3DL
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.53	2300.000	DJ
	UNKNOWN	5.82	2200.000	DJ
203-64-5	4H-CYCLOPENTA[DEF]PHENANTHRENE	14.90	910.000	DJN
84-65-1	9,10-ANTHRACENEDIONE	15.29	640.000	DJN
243-17-4	11H-BENZO[B]FLUORENE	17.03	700.000	DJN
	UNKNOWNAMIDE	17.68	4000.000	DJ
203-12-3	BENZO[GHI]FLUORANTHENE	18.24	350.000	DJN
	UNKNOWNAMIDE	20.07	600.000	DJ
198-55-0	PERYLENE	20.89	930.000	DJN
	UNKNOWNPAH	21.32	450.000	DJ
	UNKNOWNALDEHYDE	22.20	530.000	DJ
215-58-7	BENZO[B]TRIPHENYLENE	22.61	710.000	DJN
	UNKNOWNPAH	22.66	580.000	DJ
	UNKNOWN	22.71	350.000	DJ
83-47-6	.GAMMA.-SITOSTEROL	22.87	1500.000	DJN
191-26-4	DIBENZO[DEF,MNO]CHRYSENE	22.96	400.000	DJN
	UNKNOWNPAH	23.02	570.000	DJ
22611-26-3	D:C-FRIEDOOLEAN-8-EN-3-ONE	23.24	790.000	DJN
	UNKNOWN	23.34	520.000	DJ
	UNKNOWNHYDROCARBON	23.44	400.000	DJ
1058-61-3	STIGMAST-4-EN-3-ONE	23.51	1100.000	DJN
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.80	2700.000	DJN
	UNKNOWN	23.94	360.000	DJ
	UNKNOWN	24.07	960.000	DJ
	1,2:3,4-DIBENZPYRENE	24.15	500.000	DJ
192-65-4	NAPHTHO[1,2,3,4-DEF]CHRYSENE	24.33	450.000	DJN
191-07-1	CORONENE	24.81	410.000	DJN

Semivolatile Analysis Data - EAGR6
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.18	950.000	J
	UNKNOWN	4.53	1900.000	J
872-05-9	1-DECENE	10.75	990.000	JN
53555-64-9	NAPHTHALENE,1,3,5,7-TETRACHLORO-	14.75	320.000	JN
57-10-3	HEXADECANOICACID	14.87	720.000	JN
112-80-1	OLEICACID	16.16	340.000	JN
	UNKNOWNAMIDE	17.68	4500.000	J
	UNKNOWNHYDROCARBON	18.39	540.000	J
1599-67-3	1-DOCOSENE	19.55	1500.000	JN
	UNKNOWNAMIDE	20.07	640.000	J
	UNKNOWNALDEHYDE	20.30	470.000	J
7390-81-0	OXIRANE,HEXADECYL-	21.31	430.000	JN
	UNKNOWN	21.81	400.000	J
59-02-9	VITAMINE	21.91	320.000	JN
7390-81-0	OXIRANE,HEXADECYL-	22.21	600.000	JN
	UNKNOWN	22.62	380.000	J
83-47-6	.GAMMA.-SITOSTEROL	22.87	1900.000	JN
80-97-7	CHOLESTANOL	22.92	380.000	JN
	UNKNOWN	23.02	420.000	J
	UNKNOWNPAH	23.07	350.000	J
	UNKNOWN	23.24	570.000	J
	UNKNOWN	23.35	640.000	J
	UNKNOWN	23.42	740.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.52	1200.000	JN
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.80	3800.000	JN
	UNKNOWN	23.95	1000.000	J
	UNKNOWN	24.08	3000.000	J

Semivolatile Analysis Data - EAHZ3
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.18	720.000	J
	UNKNOWN	4.53	1800.000	J
	UNKNOWN	4.65	350.000	J
103-82-2	BENZENEACETICACID	8.35	450.000	JN
872-05-9	1-DECENE	10.75	640.000	JN
2091-29-4	9-HEXADECENOICACID	14.75	260.000	JN
57-10-3	HEXADECANOICACID	14.88	650.000	JN
112-88-9	1-OCTADECENE	15.20	320.000	JN
112-80-1	OLEICACID	16.16	340.000	JN
	UNKNOWNAMIDE	16.48	300.000	J
	UNKNOWNAMIDE	17.68	3800.000	J
	UNKNOWNAMIDE	20.07	690.000	J
	1-HEXACOSANAL	22.21	260.000	J
83-48-7	STIGMASTEROL	22.61	380.000	JN
83-47-6	.GAMMA.-SITOSTEROL	22.87	940.000	JN
	UNKNOWNALDEHYDE	23.02	370.000	J
	UNKNOWN	23.23	560.000	J
	UNKNOWN	23.31	280.000	J
	2-TRITRIACONTANONE	23.35	660.000	J
	UNKNOWN	23.45	280.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.52	1200.000	JN
	UNKNOWN	23.61	300.000	J
	UNKNOWN	23.67	560.000	J
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.80	2000.000	JN
	UNKNOWN	23.96	260.000	J
	UNKNOWN	24.08	280.000	J

Semivolatile Analysis Data - EAHZ4
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.18	580.000	J
	UNKNOWN	4.53	2000.000	J
	UNKNOWN	4.65	310.000	J
	UNKNOWN	5.82	1100.000	J
872-05-9	1-DECENE	10.75	630.000	JN
57-10-3	HEXADECANOICACID	14.88	560.000	JN
112-80-1	OLEICACID	16.16	290.000	JN
	UNKNOWNAMIDE	16.48	230.000	J
	UNKNOWNAMIDE	17.69	3000.000	J
	UNKNOWNAMIDE	17.81	200.000	J
74685-33-9	3-EICOSENE,(E)-	18.40	350.000	JN
1599-67-3	1-DOCOSENE	19.54	980.000	JN
	UNKNOWNAMIDE	20.07	520.000	J
	UNKNOWNALDEHYDE	20.30	380.000	J
638-66-4	OCTADECANAL	21.32	390.000	JN
	UNKNOWN	21.81	240.000	J
59-02-9	VITAMINE	21.91	250.000	JN
77899-10-6	(Z)14-TRICOSENYLFORMATE	22.21	560.000	JN
83-48-7	STIGMASTEROL	22.61	210.000	JN
83-47-6	.GAMMA.-SITOSTEROL	22.87	1000.000	JN
	UNKNOWNALDEHYDE	23.02	240.000	J
	UNKNOWNKETONE	23.35	360.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.52	1100.000	JN
	UNKNOWN	23.61	240.000	J
	UNKNOWN	23.67	290.000	J
	UNKNOWN	23.72	350.000	J
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.81	2000.000	JN
	UNKNOWN	23.95	370.000	J
	UNKNOWNHYDROCARBON	24.08	610.000	J

Semivolatile Analysis Data - EAHZ5
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.53	1600.000	J
	UNKNOWN	4.65	490.000	J
98-82-8	BENZENE,(1-METHYLETHYL)-	4.69	540.000	JN
108-67-8	BENZENE,1,3,5-TRIMETHYL-	4.77	430.000	JN
95-36-3	1,2,4-TRIMETHYLBENZENE	5.09	1500.000	JN
95-36-3	1,2,4-TRIMETHYLBENZENE	5.48	660.000	JN
	UNKNOWN	5.82	1800.000	J
90-12-0	NAPHTHALENE,1-METHYL-	9.20	2000.000	JN
581-42-0	NAPHTHALENE,2,6-DIMETHYL-	10.21	1200.000	JN
581-40-8	NAPHTHALENE,2,3-DIMETHYL-	10.37	1300.000	JN
581-42-0	NAPHTHALENE,2,6-DIMETHYL-	10.40	1200.000	JN
573-98-8	NAPHTHALENE,1,2-DIMETHYL-	10.75	1200.000	JN
829-26-5	NAPHTHALENE,2,3,6-TRIMETHYL-	11.47	520.000	JN
2245-38-7	NAPHTHALENE,1,6,7-TRIMETHYL-	11.64	450.000	JN
2131-42-2	NAPHTHALENE,1,4,6-TRIMETHYL-	11.79	960.000	JN
7320-53-8	DIBENZOFURAN,4-METHYL-	12.47	780.000	JN
55720-40-6	NAPHTHALENE,2,3,6-TRICHLORO-	13.35	2400.000	JN
55720-40-6	NAPHTHALENE,2,3,6-TRICHLORO-	14.00	920.000	JN
20020-02-4	NAPHTHALENE,1,2,3,4-TETRACHLORO-	14.75	1200.000	JN
57-10-3	HEXADECANOICACID	14.88	590.000	JN
20020-02-4	NAPHTHALENE,1,2,3,4-TETRACHLORO-	15.42	590.000	JN
20020-02-4	NAPHTHALENE,1,2,3,4-TETRACHLORO-	15.53	1200.000	JN
20020-02-4	NAPHTHALENE,1,2,3,4-TETRACHLORO-	15.79	780.000	JN
	UNKNOWNPAH	16.16	450.000	J
7343-06-8	PHENANTHRENE,-TETRAMETHYL-	17.00	580.000	JN
	UNKNOWNAMIDE	17.69	2300.000	J
	UNKNOWNHYDROCARBON	23.67	570.000	J
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.81	1600.000	JN

Semivolatile Analysis Data - EAMJ8
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.53	1800.000	J
	UNKNOWN	5.83	3000.000	J
112-39-0	HEXADECANOICACID,METHYLESTER	14.60	600.000	JN
2091-29-4	9-HEXADECENOICACID	14.76	1900.000	JN
2091-29-4	9-HEXADECENOICACID	14.81	800.000	JN
57-10-3	HEXADECANOICACID	14.89	3100.000	JN
	UNKNOWNHYDROCARBON	15.20	980.000	J
112-80-1	OLEICACID	16.20	2300.000	JN
	UNKNOWNAMIDE	16.49	720.000	J
3442-78-2	PYRENE,2-METHYL-	17.03	490.000	JN
	UNKNOWNAMIDE	17.69	7100.000	J
	UNKNOWNAMIDE	17.81	730.000	J
	UNKNOWNPAH	18.24	480.000	J
	UNKNOWN	20.30	650.000	J
198-55-0	PERYLENE	20.91	550.000	JN
59-02-9	VITAMINE	21.92	590.000	JN
	1-HEXACOSANAL	22.22	800.000	J
	UNKNOWNPAH	22.68	460.000	J
83-47-6	.GAMMA.-SITOSTEROL	22.87	1800.000	JN
	UNKNOWNPAH	22.95	1000.000	J
	UNKNOWNALDEHYDE	23.03	710.000	J
	UNKNOWNPAH	23.07	570.000	J
	UNKNOWN	23.24	700.000	J
	UNKNOWNKETONE	23.35	750.000	J
	UNKNOWN	23.42	3600.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.51	1300.000	JN
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.81	2600.000	JN

Semivolatile Analysis Data - EAMJ9
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.19	470.000	BJ
	UNKNOWN	4.33	640.000	J
	UNKNOWN	4.53	2100.000	J
	UNKNOWN	4.65	410.000	J
613-12-7	ANTHRACENE,2-METHYL-	14.75	340.000	JN
	UNKNOWNORGANICACID	14.81	460.000	J
57-10-3	HEXADECANOICACID	14.89	1800.000	JN
84-65-1	9,10-ANTHRACENEDIONE	15.30	310.000	JN
2467-02-9	PHENOL,2,2'-METHYLENEBIS-	15.36	320.000	JN
620-92-8	PHENOL,4,4'-METHYLENEBIS-	15.84	590.000	JN
112-80-1	OLEICACID	16.16	760.000	JN
	UNKNOWNAMIDE	17.69	3000.000	J
	UNKNOWNAMIDE	20.07	490.000	J
	UNKNOWNALDEHYDE	20.29	400.000	J
629-96-9	1-EICOSANOL	20.62	490.000	JN
124-25-4	TETRADECANAL	21.33	330.000	JN
124-25-4	TETRADECANAL	22.21	520.000	JN
	UNKNOWNPAH	22.61	290.000	J
83-47-6	.GAMMA.-SITOSTEROL	22.87	1500.000	JN
	UNKNOWNPAH	22.94	600.000	J
	UNKNOWNALDEHYDE	23.02	470.000	J
	UNKNOWN	23.13	660.000	BJ
	UNKNOWNPAH	23.25	550.000	J
	UNKNOWNKETONE	23.34	290.000	J
1615-94-7	D:B-FRIEDO-B':A'-NEOGAMMACER-5-EN-3-OL,	23.42	630.000	JN
1058-61-3	STIGMAST-4-EN-3-ONE	23.51	1100.000	JN
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.80	1800.000	JN
	UNKNOWNHYDROCARBON	23.94	990.000	J
	UNKNOWNHYDROCARBON	24.08	1200.000	J

Semivolatile Analysis Data - EAMK0
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
123-42-2	2-PENTANONE,4-HYDROXY-4-METHYL-	3.43	29000.000	AJN
	UNKNOWN	4.53	1700.000	J
	UNKNOWN	5.83	2300.000	J
	UNKNOWNHYDROCARBON	12.74	920.000	J
2091-29-4	9-HEXADECENOICACID	14.75	510.000	JN
109-29-5	OXACYCLOHEPTADECAN-2-ONE	14.81	390.000	JN
57-10-3	HEXADECANOICACID	14.88	1400.000	JN
2490-48-4	1-HEXADECANOL,2-METHYL-	15.20	330.000	JN
112-80-1	OLEICACID	16.16	660.000	JN
112-80-1	OLEICACID	16.19	440.000	JN
	UNKNOWNAMIDE	16.48	300.000	J
	UNKNOWNAMIDE	17.69	4000.000	J
	UNKNOWNAMIDE	17.81	290.000	J
	UNKNOWNAMIDE	20.07	400.000	J
	UNKNOWNALDEHYDE	20.30	330.000	J
18435-45-5	1-NONADECENE	20.62	260.000	JN
7390-81-0	OXIRANE,HEXADECYL-	21.32	230.000	JN
	UNKNOWN	21.82	270.000	J
57-88-5	CHOLESTEROL	22.02	410.000	JN
7390-81-0	OXIRANE,HEXADECYL-	22.21	400.000	JN
	UNKNOWNHYDROCARBON	22.61	280.000	J
	UNKNOWNHYDROCARBON	22.67	230.000	J
83-47-6	.GAMMA.-SITOSTEROL	22.86	620.000	JN
	UNKNOWNPAH	23.02	340.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.51	480.000	JN
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.80	2100.000	JN
	UNKNOWNHYDROCARBON	23.94	410.000	J
	UNKNOWNHYDROCARBON	24.07	750.000	J

Semivolatile Analysis Data - EARJ5
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.50	260.000	J
	UNKNOWN	4.53	1900.000	J
	UNKNOWN	5.83	2000.000	J
	UNKNOWNHYDROCARBON	12.75	680.000	J
779-02-2	ANTHRACENE,9-METHYL-	14.74	440.000	JN
	UNKNOWNORGANICACID	14.81	220.000	J
57-10-3	HEXADECANOICACID	14.89	1400.000	JN
112-80-1	OLEICACID	16.16	780.000	JN
	UNKNOWNORGANICACID	16.19	230.000	J
57-11-4	OCTADECANOICACID	16.30	250.000	JN
	UNKNOWN	16.46	530.000	J
	UNKNOWNAMIDE	17.68	2000.000	J
	UNKNOWN	20.30	510.000	J
192-97-2	BENZO[E]PYRENE	20.90	240.000	JN
	UNKNOWNALDEHYDE	21.32	350.000	J
	UNKNOWN	21.81	290.000	J
	1-HEXACOSANAL	22.21	380.000	J
	UNKNOWNPAH	22.61	350.000	J
83-47-6	.GAMMA.-SITOSTEROL	22.86	850.000	JN
	UNKNOWNHYDROCARBON	23.02	340.000	J
	UNKNOWNHYDROCARBON	23.12	470.000	J
	UNKNOWN	23.23	340.000	J
	2-TRITRIACONTANONE	23.34	280.000	J
	UNKNOWNHYDROCARBON	23.44	260.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.50	970.000	JN
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.80	2000.000	JN
	UNKNOWNHYDROCARBON	24.07	570.000	J
191-07-1	CORONENE	24.82	260.000	JN

Semivolatile Analysis Data - EARJ6
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.53	2200.000	J
	UNKNOWN	5.83	1800.000	J
	UNKNOWNHYDROCARBON	12.75	770.000	J
2091-29-4	9-HEXADECENOICACID	14.76	420.000	JN
57-10-3	HEXADECANOICACID	14.88	1200.000	JN
	UNKNOWNHYDROCARBON	15.20	500.000	J
	UNKNOWNHYDROCARBON	15.32	350.000	J
112-80-1	OLEICACID	16.17	570.000	JN
112-80-1	OLEICACID	16.19	380.000	JN
57-11-4	OCTADECANOICACID	16.30	340.000	JN
	UNKNOWNORGANICACID	16.46	880.000	J
	UNKNOWNAMIDE	17.69	4400.000	J
	UNKNOWNAMIDE	17.81	340.000	J
	9-HEXACOSENE	20.62	330.000	J
	UNKNOWNPHTHALATE	21.81	340.000	J
	UNKNOWNORGANICACID	22.66	470.000	J
83-47-6	.GAMMA.-SITOSTEROL	22.87	880.000	JN
80-97-7	CHOLESTANOL	22.92	370.000	JN
	UNKNOWNPAH	23.02	410.000	J
	UNKNOWNPAH	23.07	610.000	J
	UNKNOWNPAH	23.22	420.000	J
	UNKNOWNKETONE	23.34	540.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.51	720.000	JN
	UNKNOWN	23.66	450.000	J
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.79	1700.000	JN
	UNKNOWN	23.94	710.000	J
	UNKNOWNHYDROCARBON	24.07	880.000	J

Semivolatile Analysis Data - EARJ7
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	4.53	2200.000	J
	UNKNOWN	5.83	1400.000	J
	UNKNOWNHYDROCARBON	13.94	200.000	J
57-10-3	HEXADECANOICACID	14.88	530.000	JN
	UNKNOWNAMIDE	17.69	3200.000	J
	UNKNOWNAMIDE	17.81	210.000	J
124-25-4	TETRADECANAL	19.20	230.000	JN
1599-67-3	1-DOCOSENE	19.54	1400.000	JN
56554-87-1	16-OCTADECENAL	20.30	430.000	JN
	1-HEXACOSANAL	21.32	480.000	J
	UNKNOWNKETONE	21.69	300.000	J
	UNKNOWN	21.82	280.000	J
59-02-9	VITAMINE	21.92	200.000	JN
	1-HEXACOSANAL	22.21	340.000	J
83-48-7	STIGMASTEROL	22.61	380.000	JN
	UNKNOWNHYDROCARBON	22.67	270.000	J
83-47-6	.GAMMA.-SITOSTEROL	22.87	1200.000	JN
6538-02-9	ERGOSTANOL	22.93	310.000	JN
638-66-4	OCTADECANAL	23.02	320.000	JN
	UNKNOWN	23.23	370.000	J
	UNKNOWNKETONE	23.35	380.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	23.52	810.000	JN
	UNKNOWNHYDROCARBON	23.66	520.000	J
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.81	1600.000	JN
	UNKNOWNHYDROCARBON	24.08	1000.000	J

Semivolatile Analysis Data - EAHZ7
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.99	140.000	J
	UNKNOWN	4.83	200.000	J
	UNKNOWN	4.95	440.000	J
872-05-9	1-DECENE	9.93	300.000	JN
	UNKNOWNAMIDE	15.59	74.000	J
	UNKNOWNAMIDE	16.80	1300.000	J
5599-71-3	9H-CARBAZOLE,3,6-DICHLORO-	16.93	100.000	JN
	UNKNOWN	19.52	93.000	J
	UNKNOWN	19.60	160.000	J
	UNKNOWNHYDROCARBON	19.76	220.000	J
192-97-2	BENZO[E]PYRENE	19.83	220.000	JN
	UNKNOWN	20.10	120.000	J
	UNKNOWN	20.28	150.000	J
	UNKNOWN	20.39	150.000	J
	UNKNOWN	20.49	100.000	J
	UNKNOWN	20.82	300.000	J
	UNKNOWN	20.95	140.000	J
	UNKNOWN	21.24	120.000	J
	UNKNOWNHYDROCARBON	21.39	140.000	J
	UNKNOWN	21.71	100.000	J
	UNKNOWN	21.77	160.000	J
	UNKNOWN	22.07	870.000	J
	UNKNOWN	22.35	90.000	J
	UNKNOWN	22.83	330.000	J
	UNKNOWN	23.33	220.000	J
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.44	1400.000	JN

Semivolatile Analysis Data - EAJM8
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.89	830.000	J
	UNKNOWN	3.99	240.000	J
	UNKNOWN	4.95	1200.000	J
57-10-3	HEXADECANOICACID	14.04	350.000	JN
112-80-1	OLEICACID	15.30	190.000	JN
	UNKNOWNAMIDE	15.61	380.000	J
	UNKNOWNAMIDE	16.79	2400.000	J
123-95-5	OCTADECANOICACID,BUTYLESTER	16.87	370.000	JN
112-92-5	1-OCTADECANOL	19.75	300.000	JN
27519-02-4	9-TRICOSENE,(Z)-	20.75	290.000	JN
	UNKNOWN	20.84	330.000	J
	UNKNOWN	20.94	200.000	J
59-02-9	VITAMINE	21.02	240.000	JN
57-88-5	CHOLESTEROL	21.07	330.000	JN
	UNKNOWN	21.31	210.000	J
	UNKNOWNALDEHYDE	21.39	320.000	J
27519-02-4	9-TRICOSENE,(Z)-	21.69	430.000	JN
	UNKNOWNKETONE	21.75	580.000	J
4536-26-9	HEXADECANOICACID,ESTER	21.94	320.000	JN
83-47-6	.GAMMA.-SITOSTEROL	22.05	960.000	JN
	UNKNOWN	22.08	980.000	J
127-22-0	TARAXEROL	22.24	850.000	JN
	UNKNOWNPAH	22.34	350.000	J
	UNKNOWN	22.38	250.000	J
	UNKNOWNPAH	22.46	270.000	J
	UNKNOWNHYDROCARBON	22.75	190.000	J
	UNKNOWN	22.83	550.000	J
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.44	2900.000	JN

Semivolatile Analysis Data - SBLK2
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
123-42-2	2-PENTANONE,4-HYDROXY-4-METHYL-	2.79	17000.000	AJN
	UNKNOWN	2.86	110.000	J
	UNKNOWN	3.50	190.000	J
	UNKNOWN	3.64	84.000	J
	UNKNOWN	3.84	300.000	J
	UNKNOWN	6.09	80.000	J
872-05-9	1-DECENE	9.87	320.000	JN
	UNKNOWNAMIDE	15.53	90.000	J
	UNKNOWNAMIDE	16.73	1600.000	J
	UNKNOWNAMIDE	16.85	190.000	J
	UNKNOWNAMIDE	19.09	70.000	J
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.33	1200.000	JN

Semivolatile Analysis Data - EAHZ7RE
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	2.70	190.000	J
	UNKNOWN	3.50	190.000	BJ
	UNKNOWN	3.95	130.000	J
	UNKNOWN	4.89	450.000	J
	UNKNOWNAMIDE	16.73	1400.000	BJ
	UNKNOWN	19.44	170.000	J
	UNKNOWN	19.53	180.000	J
192-97-2	BENZO[E]PYRENE	19.75	300.000	JN
	UNKNOWN	20.03	230.000	J
	UNKNOWN	20.21	150.000	J
	UNKNOWN	20.32	210.000	J
	UNKNOWNALDEHYDE	20.37	350.000	J
	UNKNOWN	20.43	150.000	J
	UNKNOWN	20.48	130.000	J
	UNKNOWN	20.75	420.000	J
	UNKNOWN	20.86	260.000	J
	UNKNOWN	20.95	120.000	J
	UNKNOWN	20.99	190.000	J
	UNKNOWN	21.25	160.000	J
	UNKNOWNALDEHYDE	21.32	300.000	J
	UNKNOWN	21.68	280.000	J
	UNKNOWN	21.97	870.000	J
	UNKNOWN	22.18	210.000	J
	UNKNOWN	22.25	200.000	J
	UNKNOWN	22.31	280.000	J
	UNKNOWN	22.72	380.000	J
	UNKNOWN	23.21	200.000	J

Semivolatile Analysis Data - EAHZ8
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
123-42-2	2-PENTANONE,4-HYDROXY-4-METHYL-	2.74	36000.000	AJN
	UNKNOWN	3.83	2000.000	BJ
779-02-2	ANTHRACENE,9-METHYL-	13.71	1100.000	JN
203-64-5	4H-CYCLOPENTA[DEF]PHENANTHRENE	13.85	1800.000	JN
84-65-1	9,10-ANTHRACENEDIONE	14.25	4200.000	JN
5737-13-3	CYCLOPENTA(DEF)PHENANTHRENONE	14.82	1100.000	JN
238-84-6	11H-BENZO[A]FLUORENE	15.96	1000.000	JN
82-05-3	7H-BENZ[DE]ANTHRACEN-7-ONE	16.88	940.000	JN
1090-13-7	5,12-NAPHTHACENEDIONE	18.34	990.000	JN
1090-13-7	5,12-NAPHTHACENEDIONE	18.81	1500.000	JN
	UNKNOWN	19.11	1700.000	J
	UNKNOWN	19.26	1800.000	J
207-08-9	BENZO[]FLUORANTHENE	19.50	1300.000	JN
192-97-2	BENZO[E]PYRENE	19.76	3700.000	JN
	UNKNOWNPAH	20.02	1400.000	J
	UNKNOWN	20.19	1200.000	J
	UNKNOWNPAH	20.35	2600.000	J
	UNKNOWN	20.75	1400.000	J
	UNKNOWNPAH	21.09	1500.000	J
	UNKNOWN	21.18	2100.000	J
	UNKNOWNPAH	21.32	2100.000	J
	UNKNOWNPAH	21.63	1400.000	J
	UNKNOWNPAH	21.83	1100.000	J
191-26-4	DIBENZO[DEF,MNO]CHRYSENE	21.95	1400.000	JN
	UNKNOWNPAH	22.08	950.000	J
	UNKNOWN	22.52	1000.000	J
	UNKNOWN	23.32	1000.000	J
	1,2:4,5-DIBENZPYRENE	23.42	1300.000	J
191-07-1	CORONENE	24.20	1400.000	JN

Semivolatile Analysis Data - EAJM7
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.95	250.000	J
	UNKNOWN	4.84	160.000	J
	UNKNOWN	4.90	1200.000	J
57-10-3	HEXADECANOICACID	13.97	130.000	JN
243-17-4	11H-BENZO[B]FLUORENE	15.96	170.000	JN
	UNKNOWNPAH	18.81	140.000	J
	UNKNOWN	19.00	190.000	J
	UNKNOWN	19.26	310.000	J
	UNKNOWN	19.43	440.000	J
	UNKNOWNPAH	19.51	170.000	J
	UNKNOWN	19.55	200.000	J
192-97-2	BENZO[E]PYRENE	19.75	380.000	JN
	UNKNOWNPHTHALATE	20.86	220.000	J
	UNKNOWN	21.16	270.000	J
	UNKNOWN	21.64	140.000	J
	UNKNOWN	21.69	170.000	J
83-47-6	.GAMMA.-SITOSTEROL	21.96	1100.000	JN
	UNKNOWNPAH	22.25	150.000	J
5945-53-9	D:C-FRIEDOOLEANAN-3-ONE	22.36	220.000	JN
638-95-9	.ALPHA.-AMYRIN	22.52	320.000	JN
1058-61-3	STIGMAST-4-EN-3-ONE	22.73	340.000	JN
	UNKNOWNHYDROCARBON	23.20	340.000	J
191-07-1	CORONENE	24.21	130.000	JN

Semivolatile Analysis Data - EAJM8RE
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
123-42-2	2-PENTANONE,4-HYDROXY-4-METHYL-	3.50	520.000	AJN
	UNKNOWN	3.95	220.000	J
	UNKNOWN	4.90	1400.000	J
	UNKNOWNORGANICACID	13.84	170.000	J
57-10-3	HEXADECANOICACID	13.98	470.000	JN
629-73-2	1-HEXADECENE	14.29	130.000	JN
112-80-1	OLEICACID	15.24	180.000	JN
57-11-4	OCTADECANOICACID	15.39	130.000	JN
	UNKNOWNAMIDE	15.41	130.000	J
123-95-5	OCTADECANOICACID,BUTYLESTER	16.81	320.000	JN
1599-67-3	1-DOCOSENE	18.59	620.000	JN
57-11-4	OCTADECANOICACID	18.99	150.000	JN
198-55-0	PERYLENE	19.76	180.000	JN
	1-HEXACOSANAL	20.37	130.000	J
19047-85-9	PHOSPHONICACID,DIOCTADECYLESTER	20.67	180.000	JN
	UNKNOWN	20.76	260.000	J
59-02-9	VITAMINE	20.94	130.000	JN
57-88-5	CHOLESTEROL	20.99	200.000	JN
124-25-4	TETRADECANAL	21.32	140.000	JN
	UNKNOWN	21.67	250.000	J
	UNKNOWN	21.96	830.000	J
	UNKNOWNPAH	22.15	410.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	22.72	390.000	JN
	UNKNOWN	23.19	140.000	J

Semivolatile Analysis Data - EAJM9
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.95	140.000	J
	UNKNOWN	4.90	1000.000	J
	UNKNOWNAMIDE	15.40	150.000	J
7390-81-0	OXIRANE,HEXADECYL-	17.08	160.000	JN
	UNKNOWNHYDROCARBON	17.45	240.000	J
	UNKNOWNHYDROCARBON	18.59	440.000	J
	UNKNOWN	20.76	220.000	J
	UNKNOWN	20.87	150.000	J
59-02-9	VITAMINE	20.94	150.000	JN
	UNKNOWN	21.23	190.000	J
	UNKNOWN	21.34	190.000	J
	UNKNOWN	21.57	150.000	J
	UNKNOWN	21.68	300.000	J
	UNKNOWN	21.76	320.000	J
	UNKNOWN	21.96	850.000	J
6538-02-9	ERGOSTANOL	22.02	610.000	JN
	UNKNOWNPAH	22.14	290.000	J
	UNKNOWN	22.25	430.000	J
	UNKNOWN	22.36	240.000	J
2034-72-2	STIGMASTA-3,5-DIEN-7-ONE	22.49	270.000	JN
1058-61-3	STIGMAST-4-EN-3-ONE	22.72	300.000	JN
	UNKNOWN	23.18	640.000	J
	UNKNOWN	23.57	140.000	J

Semivolatile Analysis Data - EAHZ8DL
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
2531-84-2	PHENANTHRENE,2-METHYL-	13.62	880.000	DJN
2531-84-2	PHENANTHRENE,2-METHYL-	13.66	1100.000	DJN
203-64-5	4H-CYCLOPENTA[DEF]PHENANTHRENE	13.81	1600.000	DJN
84-65-1	9,10-ANTHRACENEDIONE	14.21	3700.000	DJN
5737-13-3	CYCLOPENTA(DEF)PHENANTHRENONE	14.77	900.000	DJN
243-17-4	11H-BENZO[B]FLUORENE	15.91	1500.000	DJN
	UNKNOWNAMIDE	16.67	1100.000	DJ
82-05-3	7H-BENZ[DE]ANTHRACEN-7-ONE	16.85	1000.000	DJN
203-12-3	BENZO[GHI]FLUORANTHENE	17.10	970.000	DJN
1090-13-7	5,12-NAPHTHACENEDIONE	18.76	1100.000	DJN
	UNKNOWNPAH	19.06	920.000	DJ
	UNKNOWNPAH	19.45	960.000	DJ
192-97-2	BENZO[E]PYRENE	19.70	4900.000	DJN
	UNKNOWN	20.14	970.000	DJ
	UNKNOWNPAH	20.29	1400.000	DJ
	UNKNOWNPAH	21.05	1200.000	DJ
	UNKNOWNPAH	21.14	1400.000	DJ
	UNKNOWNPAH	21.26	2300.000	DJ
	UNKNOWNPAH	21.58	1800.000	DJ
	UNKNOWNPAH	21.64	1000.000	DJ
191-26-4	DIBENZO[DEF,MNO]CHRYSENE	21.89	1200.000	DJN
	UNKNOWNPAH	22.46	1100.000	DJ
	UNKNOWN	23.28	1700.000	DJ
	1,2:4,5-DIBENZPYRENE	23.35	3700.000	DJ
	3,4:8,9-DIBENZPYRENE	23.48	2400.000	DJ
	[3,4:9,10]DIBENZPYRENE	23.55	2200.000	DJ
191-07-1	CORONENE	23.68	910.000	DJN
191-07-1	CORONENE	24.13	3800.000	DJN

Semivolatile Analysis Data - EAHZ5DL
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
611-14-3	BENZENE,1-ETHYL-2-METHYL-	3.92	1000.000	DJN
622-96-8	BENZENE,1-ETHYL-4-METHYL-	4.55	920.000	DJN
98-86-2	ACETOPHENONE	5.06	540.000	DJN
91-57-6	NAPHTHALENE,-METHYL-	8.19	2200.000	DJN
575-37-1	NAPHTHALENE,1,7-DIMETHYL-	9.20	1200.000	DJN
581-40-8	NAPHTHALENE,2,3-DIMETHYL-	9.36	1800.000	DJN
581-42-0	NAPHTHALENE,2,6-DIMETHYL-	9.41	930.000	DJN
571-58-4	NAPHTHALENE,1,4-DIMETHYL-	9.58	980.000	DJN
112-72-1	1-TETRADECANOL	9.85	560.000	DJN
829-26-5	NAPHTHALENE,2,3,6-TRIMETHYL-	10.65	900.000	DJN
2131-42-2	NAPHTHALENE,1,4,6-TRIMETHYL-	10.80	950.000	DJN
2131-41-1	NAPHTHALENE,1,4,5-TRIMETHYL-	11.02	1800.000	DJN
7320-53-8	DIBENZOFURAN,4-METHYL-	11.33	520.000	DJN
55720-40-6	NAPHTHALENE,2,3,6-TRICHLORO-	12.30	1700.000	DJN
	UNKNOWN	12.46	590.000	DJ
55720-40-6	NAPHTHALENE,2,3,6-TRICHLORO-	12.94	680.000	DJN
20020-02-4	NAPHTHALENE,1,2,3,4-TETRACHLORO-	13.68	1000.000	DJN
20020-02-4	NAPHTHALENE,1,2,3,4-TETRACHLORO-	14.07	580.000	DJN
55720-43-9	NAPHTHALENE,1,4,6,7-TETRACHLORO-	14.34	560.000	DJN
20020-02-4	NAPHTHALENE,1,2,3,4-TETRACHLORO-	14.43	980.000	DJN
20020-02-4	NAPHTHALENE,1,2,3,4-TETRACHLORO-	14.70	630.000	DJN
	UNKNOWN	15.89	1100.000	DJ
	UNKNOWNAMIDE	16.68	2400.000	DJ
	UNKNOWN	20.70	570.000	DJ
	UNKNOWN	21.92	970.000	DJ
1058-61-3	STIGMAST-4-EN-3-ONE	22.68	540.000	DJN
123-28-4	PROPANOICACID,3,3'-THIOBIS-,DIDODECYL	23.27	3200.000	DJN

Semivolatile Analysis Data - EAHZ6
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.82	1300.000	BJ
	UNKNOWN	3.92	250.000	J
112-53-8	1-DODECANOL	9.83	400.000	JN
	UNKNOWNAMIDE	16.68	1000.000	J
50-29-3	CHLOROPHENOTHANE	16.76	370.000	JN
5599-71-3	9H-CARBAZOLE,3,6-DICHLORO-	16.82	250.000	JN
1599-67-3	1-DOCOSENE	18.56	970.000	JN
205-99-2	BENZ[E]ACEPHENANTHRYLENE	19.72	230.000	JN
56554-91-7	12-OCTADECENAL	20.33	500.000	JN
36653-82-4	1-HEXADECANOL	20.64	250.000	JN
	UNKNOWN	20.73	400.000	J
124-25-4	TETRADECANAL	21.29	440.000	JN
	UNKNOWNKETONE	21.65	420.000	J
83-47-6	.GAMMA.-SITOSTEROL	21.92	1700.000	JN
	UNKNOWN	21.98	480.000	J
	UNKNOWN	22.06	190.000	J
	UNKNOWN	22.11	200.000	J
	UNKNOWNPAH	22.21	430.000	J
	UNKNOWNHYDROCARBON	22.26	320.000	J
	UNKNOWN	22.30	420.000	J
	UNKNOWN	22.45	500.000	J
	UNKNOWNHYDROCARBON	22.60	170.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	22.68	960.000	JN
	UNKNOWN	22.94	190.000	J
	UNKNOWN	23.14	870.000	J
	UNKNOWNHYDROCARBON	23.30	3900.000	J
	UNKNOWN	23.47	430.000	J
	UNKNOWN	23.74	220.000	J

Semivolatile Analysis Data - EAJE6
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EAGR3

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
2613-89-0	PROPANEDIOICACID,PHENYL-	7.42	100.000	JN
	UNKNOWNAMIDE	15.37	110.000	J
206-49-5	ACENAPHTHO(1,2-B)PYRIDINE	15.57	180.000	JN
2693-46-1	3-FLUORANTHENAMINE	15.98	190.000	JN
	UNKNOWNPHTHALATE	16.40	90.000	J
	UNKNOWNAMIDE	16.68	2200.000	J
123-95-5	OCTADECANOICACID,BUTYLESTER	16.77	440.000	JN
	UNKNOWNALDEHYDE	17.04	110.000	J
52078-56-5	11-TRICOSENE	18.55	180.000	JN
	UNKNOWNPHTHALATE	19.00	190.000	J
	UNKNOWNAMIDE	19.06	260.000	BJ
	UNKNOWN	19.29	140.000	J
	UNKNOWNPAH	19.73	120.000	J
	UNKNOWNPAH	21.58	200.000	J
	UNKNOWN	21.91	140.000	J
	UNKNOWN	22.60	81.000	J

Case #: 27323
SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Number of Soil Samples : 20
Lab. : SWOK
Number of Water Samples : 0
Reviewer :
Date :

Sample Number :	EAGR3		EAGR3DL		EAGR4		EAGR5		EAGR6	
Sampling Location :	SD2		SD2		SD3		SD1		SD4	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	10:50		10:50		13:35		11:30		15:10	
%Moisture :	19		19		27		26		46	
pH :	5.9		5.9		7.4		7.3		7.2	
Dilution Factor :	1.0		2.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	400	U	810	U	410	U	440	U	590	U
BIS(2-CHLOROETHYL)ETHER	400	U	810	UJ	410	U	440	U	590	UJ
2-CHLOROPHENOL	400	U	810	U	410	U	440	U	590	U
1,3-DICHLOROBENZENE	400	U	810	U	410	U	440	U	590	U
1,4-DICHLOROBENZENE	400	U	810	U	410	U	440	U	590	U
1,2-DICHLOROBENZENE	400	U	810	U	410	U	440	U	590	U
2-METHYLPHENOL	400	U	810	U	410	U	440	U	590	U
2,2'-OXYBIS(1-CHLOROPROPANE)	400	U	810	UJ	410	U	440	U	590	UJ
4-METHYLPHENOL	400	U	810	U	410	U	440	U	590	U
N-NITROSO-DI-N-PROPYLAMINE	400	U	810	UJ	410	U	440	U	590	UJ
HEXACHLOROETHANE	400	U	810	U	410	U	440	U	590	U
NITROBENZENE	400	U	810	U	410	U	440	U	590	U
ISOPHORONE	400	U	810	U	410	U	440	U	590	U
2-NITROPHENOL	400	U	810	U	410	U	440	U	590	U
2,4-DIMETHYLPHENOL	400	U	810	U	410	U	440	U	590	U
BIS(2-CHLOROETHOXY)METHANE	400	U	810	U	410	U	440	U	590	U
2,4-DICHLOROPHENOL	400	U	810	U	410	U	440	U	590	U
1,2,4-TRICHLOROBENZENE	400	U	810	U	410	U	440	U	590	U
NAPHTHALENE	24	J	810	U	410	U	440	U	590	U
4-CHLOROANILINE	400	U	810	U	410	U	440	U	590	U
HEXACHLOROBUTADIENE	400	U	810	UJ	410	U	440	U	590	UJ
4-CHLORO-3-METHYLPHENOL	400	U	810	U	410	U	440	U	590	U
2-METHYLNAPHTHALENE	400	U	810	U	410	U	440	U	590	U
HEXACHLOROCYCLOPENTADIENE	400	U	810	U	410	U	440	U	590	U
2,4,6-TRICHLOROPHENOL	400	U	810	U	410	U	440	U	590	U
2,4,5-TRICHLOROPHENOL	1000	U	2000	U	1000	U	1100	U	1500	U
2-CHLORONAPHTHALENE	400	U	810	U	410	U	440	U	590	U
2-NITROANILINE	1000	U	2000	UJ	1000	U	1100	U	1500	UJ
DIMETHYLPHTHALATE	400	U	810	U	410	U	440	U	590	U
ACENAPHTHYLENE	63	J	70	J	410	U	440	U	590	U
2,6-DINITROTOLUENE	400	U	810	U	410	U	440	U	590	U
3-NITROANILINE	1000	U	2000	U	1000	U	1100	U	1500	U
ACENAPHTHENE	150	J	180	J	26	J	440	U	590	U

Analytical Results (Qualified Data)

Case #: 27323
Site :
Lab. :
Reviewer :
Date :

SDG : EAGR3
PLYMOUTH/ HAGGERTY
SWOK

Sample Number :	EAGR3		EAGR3DL		EAGR4		EAGR5		EAGR6	
Sampling Location :	SD2		SD2		SD3		SD1		SD4	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	10:50		10:50		13:35		11:30		15:10	
%Moisture :	19		19		27		26		46	
pH :	5.9		5.9		7.4		7.3		7.2	
Dilution Factor :	1.0		2.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	1000	U	2000	U	1000	U	1100	U	1500	U
4-NITROPHENOL	1000	U	2000	U	1000	U	1100	U	1500	U
DIBENZOFURAN	100	J	130	J	410	U	440	U	590	U
2,4-DINITROTOLUENE	400	U	810	U	410	U	440	U	590	U
DIETHYLPHTHALATE	400	U	810	U	410	U	440	U	590	U
4-CHLOROPHENYL-PHENYLETHER	400	U	810	U	410	U	440	U	590	U
FLUORENE	210	J	250	J	26	J	440	U	590	U
4-NITROANILINE	1000	U	2000	U	1000	U	1100	U	1500	U
4,6-DINITRO-2-METHYLPHENOL	1000	U	2000	U	1000	U	1100	U	1500	U
N-NITROSODIPHENYLAMINE	400	U	810	U	410	U	440	U	590	U
4-BROMOPHENYL-PHENYLETHER	400	U	810	U	410	U	440	U	590	U
HEXACHLOROBENZENE	400	U	810	U	410	U	440	U	590	U
PENTACHLOROPHENOL	1000	U	2000	U	1000	U	1100	U	1500	U
PHENANTHRENE	2400		3100		160	J	34	J	95	J
ANTHRACENE	390	J	460	J	47	J	440	U	590	U
CARBAZOLE	390	J	460	J	29	J	440	U	590	U
DI-N-BUTYLPHTHALATE	33	J	810	U	23	J	440	U	48	J
FLUORANTHENE	3900		4800		240	J	25	J	170	J
PYRENE	2800		3900		200	J	23	J	160	J
BUTYLBENZYLPHTHALATE	400	U	810	U	410	U	440	U	590	U
3,3'-DICHLOROBENZIDINE	400	U	810	U	410	U	440	U	590	U
BENZO(A)ANTHRACENE	1500		1800		160	J	440	U	96	J
CHRYSENE	1800		2400		130	J	25	J	140	J
BIS(2-ETHYLHEXYL)PHTHALATE	640	U	810	U	410	U	1600	U	2300	U
DI-N-OCTYLPHTHALATE	400	U	810	U	69	J	440	U	590	U
BENZO(B)FLUORANTHENE	1400		2400		100	J	440	U	130	J
BENZO(K)FLUORANTHENE	1600		1700		130	J	440	U	73	J
BENZO(A)PYRENE	1500		2000		140	J	22	J	99	J
INDENO(1,2,3-CD)PYRENE	970		1500		80	J	440	U	72	J
DIBENZ(A,H)ANTHRACENE	460		660	J	43	J	440	U	35	J
BENZO(G,H,I)PERYLENE	1000		1400		88	J	29	J	87	J

Case #: 27323 SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Lab. : SWOK
Reviewer :
Date :

Sample Number :	EAHZ3		EAHZ4		EAHZ5		EAHZ5DL		EAHZ6	
Sampling Location :	SS12		SS13		SS14		SS14		SS15	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	12:20		13:45		13:25		13:25		13:10	
%Moisture :	20		14		17		17		11	
pH :	7.4		7.5		7.4		7.4		7.4	
Dilution Factor :	1.0		1.0		1.0		2.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	390	U	360	U	400	U	790	U	350	U
BIS(2-CHLOROETHYL)ETHER	390	UJ	360	UJ	400	UJ	790	U	350	U
2-CHLOROPHENOL	390	U	360	U	400	U	790	U	350	U
1,3-DICHLOROBENZENE	390	U	360	U	400	U	790	U	350	U
1,4-DICHLOROBENZENE	390	U	360	U	400	U	790	U	27	J
1,2-DICHLOROBENZENE	390	U	360	U	400	U	790	U	350	U
2-METHYLPHENOL	390	U	360	U	27	J	790	U	350	U
2,2'-OXYBIS(1-CHLOROPROPANE)	390	UJ	360	UJ	400	UJ	790	U	350	UJ
4-METHYLPHENOL	390	U	360	U	34	J	790	U	350	U
N-NITROSO-DI-N-PROPYLAMINE	390	UJ	360	UJ	400	UJ	790	U	350	UJ
HEXACHLOROETHANE	390	U	360	U	400	U	790	U	350	U
NITROBENZENE	390	U	360	U	400	U	790	U	350	U
ISOPHORONE	390	U	360	U	400	U	790	U	350	U
2-NITROPHENOL	390	U	360	U	400	U	790	U	350	U
2,4-DIMETHYLPHENOL	390	U	360	U	400	U	790	U	350	U
BIS(2-CHLOROETHOXY)METHANE	390	U	360	U	400	U	790	U	350	U
2,4-DICHLOROPHENOL	390	U	360	U	400	U	790	U	350	U
1,2,4-TRICHLOROBENZENE	390	U	360	U	400	U	790	U	350	U
NAPHTHALENE	390	U	360	U	3000		3100		350	U
4-CHLOROANILINE	390	U	360	U	400	U	790	U	350	U
HEXACHLOROBUTADIENE	390	UJ	360	UJ	400	UJ	790	U	350	U
4-CHLORO-3-METHYLPHENOL	390	U	360	U	400	U	790	U	350	U
2-METHYLNAPHTHALENE	390	U	360	U	3900		2200		350	U
HEXACHLOROCYCLOPENTADIENE	390	U	360	U	400	U	790	U	350	U
2,4,6-TRICHLOROPHENOL	390	U	360	U	400	U	790	U	350	U
2,4,5-TRICHLOROPHENOL	980	U	900	U	1000	U	2000	U	880	U
2-CHLORONAPHTHALENE	390	U	360	U	400	U	790	U	350	U
2-NITROANILINE	980	UJ	900	UJ	1000	UJ	2000	U	880	U
DIMETHYLPHTHALATE	390	U	360	U	400	U	790	U	350	U
ACENAPHTHYLENE	390	U	360	U	400	U	790	U	350	U
2,6-DINITROTOLUENE	390	U	360	U	400	U	790	U	350	U
3-NITROANILINE	980	U	900	U	1000	U	2000	U	880	U
ACENAPHTHENE	390	U	360	U	400	U	790	U	350	U

Analytical Results (Qualified Data)

Case #: 27323
Site :
Lab. :
Reviewer :
Date :

SDG : EAGR3
PLYMOUTH/ HAGGERTY
SWOK

Sample Number :	EAHZ3		EAHZ4		EAHZ5		EAHZ5DL		EAHZ6	
Sampling Location :	SS12		SS13		SS14		SS14		SS15	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	12:20		13:45		13:25		13:25		13:10	
%Moisture :	20		14		17		17		11	
pH :	7.4		7.5		7.4		7.4		7.4	
Dilution Factor :	1.0		1.0		1.0		2.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	980	U	900	U	1000	U	2000	U	880	UJ
4-NITROPHENOL	980	U	900	U	1000	U	2000	U	880	U
DIBENZOFURAN	390	U	360	U	820		900		350	U
2,4-DINITROTOLUENE	390	U	360	U	400	U	790	U	350	U
DIETHYLPHTHALATE	390	U	360	U	400	U	790	U	350	U
4-CHLOROPHENYL-PHENYLETHER	390	U	360	U	400	U	790	U	350	U
FLUORENE	390	U	360	U	37	J	790	U	350	U
4-NITROANILINE	980	U	900	U	1000	U	2000	U	880	U
4,6-DINITRO-2-METHYLPHENOL	980	U	900	U	1000	U	2000	U	880	U
N-NITROSODIPHENYLAMINE	390	U	360	U	400	U	790	U	350	U
4-BROMOPHENYL-PHENYLETHER	390	U	360	U	400	U	790	U	350	U
HEXACHLOROBENZENE	390	U	360	U	400	U	790	U	350	U
PENTACHLOROPHENOL	980	U	900	U	1000	U	2000	U	880	U
PHENANTHRENE	70	J	71	J	810		910		110	J
ANTHRACENE	390	U	360	U	110	J	100	J	350	U
CARBAZOLE	390	U	360	U	120	J	130	J	350	U
DI-N-BUTYLPHTHALATE	42	J	24	J	35	J	790	U	27	J
FLUORANTHENE	130	J	160	J	310	J	320	J	250	J
PYRENE	110	J	130	J	320	J	380	J	160	J
BUTYLBENZYLPHTHALATE	390	U	360	U	400	U	790	U	350	U
3,3'-DICHLOROBENZIDINE	390	U	360	U	400	U	790	U	350	U
BENZO(A)ANTHRACENE	58	J	70	J	240	J	250	J	78	J
CHRYSENE	93	J	100	J	260	J	340	J	110	J
BIS(2-ETHYLHEXYL)PHTHALATE	730	U	360	U	2000	U	2400		350	U
DI-N-OCTYLPHTHALATE	390	U	360	U	400	U	790	U	350	UJ
BENZO(B)FLUORANTHENE	90	J	120	J	200	J	150	J	160	J
BENZO(K)FLUORANTHENE	46	J	53	J	160	J	200	J	120	J
BENZO(A)PYRENE	60	J	72	J	180	J	200	J	100	J
INDENO(1,2,3-CD)PYRENE	51	J	64	J	120	J	160	J	94	J
DIBENZ(A,H)ANTHRACENE	22	J	29	J	72	J	84	J	40	J
BENZO(G,H,I)PERYLENE	60	J	66	J	150	J	210	J	110	J

Case #: 27323
Site :
Lab. :
Reviewer :
Date :

SDG : EAGR3
PLYMOUTH/ HAGGERTY
SWOK

Analytical Results (Qualified Data)

Sample Number :	EAHZ7		EAHZ7RE		EAHZ8		EAHZ8DL		EAJE6	
Sampling Location :	SS16		SS16		SS17		SS17		SB4	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	14:10		14:10		15:25		15:25		12:10	
%Moisture :	9		9		9		9		16	
pH :	7.3		7.3		7.2		7.2		7.2	
Dilution Factor :	1.0		1.0		5.0		10.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	360	UJ	360	U	1700	U	3400	U	390	U
BIS(2-CHLOROETHYL)ETHER	360	UJ	360	U	1700	U	3400	U	390	U
2-CHLOROPHENOL	360	UJ	360	U	1700	U	3400	U	390	U
1,3-DICHLOROBENZENE	360	UJ	360	U	1700	U	3400	U	390	U
1,4-DICHLOROBENZENE	23	J	22	J	1700	U	3400	U	37	J
1,2-DICHLOROBENZENE	360	UJ	360	U	1700	U	3400	U	390	U
2-METHYLPHENOL	360	UJ	360	U	1700	U	3400	U	390	U
2,2'-OXYBIS(1-CHLOROPROPANE)	360	UJ	360	U	1700	U	3400	U	390	UJ
4-METHYLPHENOL	360	UJ	360	U	1700	U	3400	U	390	U
N-NITROSO-DI-N-PROPYLAMINE	360	UJ	360	U	1700	U	3400	U	390	UJ
HEXACHLOROETHANE	360	UJ	360	U	1700	U	3400	U	390	U
NITROBENZENE	360	UJ	360	U	1700	U	3400	U	390	U
ISOPHORONE	360	UJ	360	U	1700	U	3400	U	390	U
2-NITROPHENOL	360	UJ	360	U	1700	U	3400	U	390	U
2,4-DIMETHYLPHENOL	360	UJ	360	U	1700	U	3400	U	390	U
BIS(2-CHLOROETHOXY)METHANE	360	UJ	360	U	1700	U	3400	U	390	U
2,4-DICHLOROPHENOL	360	UJ	360	U	1700	U	3400	U	390	U
1,2,4-TRICHLOROBENZENE	360	UJ	360	U	1700	U	3400	U	390	U
NAPHTHALENE	360	UJ	360	U	1700	U	3400	U	390	U
4-CHLOROANILINE	360	UJ	360	U	1700	U	3400	U	390	U
HEXACHLOROBUTADIENE	360	UJ	360	U	1700	U	3400	U	390	U
4-CHLORO-3-METHYLPHENOL	360	UJ	360	U	1700	U	3400	U	390	U
2-METHYLNAPHTHALENE	360	UJ	360	U	1700	U	3400	U	390	U
HEXACHLOROCYCLOPENTADIENE	360	UJ	360	U	1700	U	3400	U	390	U
2,4,6-TRICHLOROPHENOL	360	UJ	360	U	1700	U	3400	U	390	U
2,4,5-TRICHLOROPHENOL	910	UJ	910	U	4200	U	8500	U	980	U
2-CHLORONAPHTHALENE	360	UJ	360	U	1700	U	3400	U	390	U
2-NITROANILINE	910	UJ	910	U	4200	U	8500	U	980	U
DIMETHYLPHTHALATE	360	UJ	360	U	1700	U	3400	U	390	U
ACENAPHTHYLENE	360	UJ	360	U	220	J	180	J	390	U
2,6-DINITROTOLUENE	360	UJ	360	UJ	1700	UJ	3400	U	390	U
3-NITROANILINE	910	UJ	910	U	4200	U	8500	U	980	U
ACENAPHTHENE	360	UJ	360	U	570	J	540	J	390	U

Case #: 27323 SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Lab. : SWOK
Reviewer :
Date :

Sample Number :	EAHZ7		EAHZ7RE		EAHZ8		EAHZ8DL		EAJE6	
Sampling Location :	SS16		SS16		SS17		SS17		SB4	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	14:10		14:10		15:25		15:25		12:10	
%Moisture :	9		9		9		9		16	
pH :	7.3		7.3		7.2		7.2		7.2	
Dilution Factor :	1.0		1.0		5.0		10.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	910	R	910	R	4200	R	8500	U	980	UJ
4-NITROPHENOL	910	UJ	910	U	4200	U	8500	U	980	U
DIBENZOFURAN	360	UJ	360	U	380	J	400	J	390	U
2,4-DINITROTOLUENE	360	UJ	360	U	1700	U	3400	U	390	U
DIETHYLPHTHALATE	360	UJ	360	U	1700	U	3400	U	390	U
4-CHLOROPHENYL-PHENYLETHER	360	UJ	360	U	1700	U	3400	U	390	U
FLUORENE	360	UJ	360	U	850	J	760	J	390	U
4-NITROANILINE	910	UJ	910	U	4200	U	8500	U	980	U
4,6-DINITRO-2-METHYLPHENOL	910	R	910	R	4200	R	8500	U	980	U
N-NITROSODIPHENYLAMINE	360	UJ	360	U	1700	U	3400	U	390	U
4-BROMOPHENYL-PHENYLETHER	360	UJ	360	U	1700	U	3400	U	390	U
HEXACHLOROBENZENE	360	UJ	360	U	1700	U	3400	U	390	U
PENTACHLOROPHENOL	910	UJ	910	U	4200	U	8500	U	980	U
PHENANTHRENE	52	J	52	J	11000		12000		390	U
ANTHRACENE	360	UJ	360	U	1200	J	1200	J	390	U
CARBAZOLE	360	UJ	360	U	2000		1700	J	390	U
DI-N-BUTYLPHTHALATE	39	J	45	J	100	J	3400	U	27	J
FLUORANTHENE	94	J	120	J	20000		20000		390	U
PYRENE	100	J	88	J	16000		18000		390	U
BUTYLBENZYLPHTHALATE	360	UJ	360	UJ	1700	U	3400	U	390	U
3,3'-DICHLOROBENZIDINE	360	UJ	360	UJ	1700	UJ	3400	U	390	U
BENZO(A)ANTHRACENE	55	J	64	J	8400		7100		390	U
CHRYSENE	72	J	80	J	11000		12000		390	UJ
BIS(2-ETHYLHEXYL)PHTHALATE	360	U	360	U	4700		3400	U	390	U
DI-N-OCTYLPHTHALATE	360	UJ	360	U	1700	U	3400	U	310	J
BENZO(B)FLUORANTHENE	68	J	71	J	8800		5800		390	UJ
BENZO(K)FLUORANTHENE	59	J	56	J	1300		11000		390	U
BENZO(A)PYRENE	62	J	62	J	8800		7600		390	U
INDENO(1,2,3-CD)PYRENE	40	J	38	J	6100		7000		390	U
DIBENZ(A,H)ANTHRACENE	360	UJ	360	U	2700		2500	J	390	U
BENZO(G,H,I)PERYLENE	51	J	50	J	6100		7700		390	U

Case #: 27323 SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Lab. : SWOK
Reviewer :
Date :

Sample Number :	EAJM7		EAJM7MS		EAJM7MSD		EAJM8		EAJM8RE	
Sampling Location :	SS6		SS6		SS6		SS7		SS7	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	12:25		12:25		12:25		12:35		12:35	
%Moisture :	24		24		24		19		19	
pH :	7.4		7.4		7.4		7.9		7.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	430	U	2200		2300		390	UJ	390	U
BIS(2-CHLOROETHYL)ETHER	430	U	420	U	420	U	390	UJ	390	U
2-CHLOROPHENOL	430	U	1800		1800		390	UJ	23	J
1,3-DICHLOROBENZENE	430	U	420	U	420	U	390	UJ	390	U
1,4-DICHLOROBENZENE	40	J	1200		1200		24	J	38	J
1,2-DICHLOROBENZENE	430	U	420	U	420	U	390	UJ	390	U
2-METHYLPHENOL	430	U	420	U	420	U	390	UJ	390	U
2,2'-OXYBIS(1-CHLOROPROPANE)	430	U	420	U	420	U	390	UJ	390	U
4-METHYLPHENOL	430	U	420	U	420	U	390	UJ	390	U
N-NITROSO-DI-N-PROPYLAMINE	430	U	1800		1900		390	UJ	390	U
HEXACHLOROETHANE	430	U	420	U	420	U	390	UJ	390	U
NITROBENZENE	430	U	420	U	420	UJ	390	UJ	390	U
ISOPHORONE	430	U	420	U	420	UJ	390	UJ	390	U
2-NITROPHENOL	430	U	420	U	420	UJ	390	UJ	390	U
2,4-DIMETHYLPHENOL	430	U	420	U	420	UJ	390	UJ	390	U
BIS(2-CHLOROETHOXY)METHANE	430	U	420	U	420	UJ	390	UJ	390	U
2,4-DICHLOROPHENOL	430	U	420	U	420	UJ	390	UJ	390	U
1,2,4-TRICHLOROBENZENE	430	U	1200		1200	J	390	UJ	390	U
NAPHTHALENE	430	U	38	J	420	UJ	390	UJ	390	U
4-CHLOROANILINE	430	U	420	U	420	UJ	390	UJ	390	U
HEXACHLOROBUTADIENE	430	U	420	U	420	UJ	390	UJ	390	U
4-CHLORO-3-METHYLPHENOL	430	U	2600		2700	J	390	UJ	32	J
2-METHYLNAPHTHALENE	59	J	50	J	420	UJ	390	UJ	390	U
HEXACHLOROCYCLOPENTADIENE	430	U	420	U	420	UJ	390	UJ	390	U
2,4,6-TRICHLOROPHENOL	430	U	420	U	420	UJ	390	UJ	390	U
2,4,5-TRICHLOROPHENOL	1100	U	1100	U	1100	UJ	980	UJ	980	U
2-CHLORONAPHTHALENE	430	U	420	U	420	UJ	390	UJ	390	U
2-NITROANILINE	1100	U	1100	U	1100	UJ	980	UJ	980	U
DIMETHYLPHTHALATE	430	U	420	U	420	UJ	390	UJ	390	U
ACENAPHTHYLENE	430	U	420	U	420	UJ	390	UJ	390	U
2,6-DINITROTOLUENE	430	UJ	420	UJ	420	UJ	390	UJ	390	UJ
3-NITROANILINE	1100	U	1100	U	1100	UJ	980	UJ	980	U
ACENAPHTHENE	74	J	1500		1400	J	390	UJ	25	J

Case #: 27323
SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Lab. : SWOK
Reviewer :
Date :

Sample Number :	EAJM7		EAJM7MS		EAJM7MSD		EAJM8		EAJM8RE	
Sampling Location :	SS6		SS6		SS6		SS7		SS7	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	12:25		12:25		12:25		12:35		12:35	
%Moisture :	24		24		24		19		19	
pH :	7.4		7.4		7.4		7.9		7.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	1100	R	1100	R	1100	R	980	R	980	R
4-NITROPHENOL	1100	U	2300		2300	J	980	UJ	980	U
DIBENZOFURAN	41	J	92	J	420	UJ	390	UJ	390	U
2,4-DINITROTOLUENE	430	U	1500		1600	J	390	UJ	390	U
DIETHYLPHTHALATE	430	U	420	U	420	UJ	390	UJ	390	U
4-CHLOROPHENYL-PHENYLETHER	430	U	420	U	420	UJ	390	UJ	390	U
FLUORENE	87	J	170	J	43	J	390	UJ	390	U
4-NITROANILINE	1100	U	1100	U	1100	UJ	980	UJ	980	U
4,6-DINITRO-2-METHYLPHENOL	1100	R	1100	R	1100	R	980	R	980	R
N-NITROSODIPHENYLAMINE	430	UJ	420	U	420	UJ	390	UJ	390	UJ
4-BROMOPHENYL-PHENYLETHER	430	UJ	420	U	420	UJ	390	UJ	390	UJ
HEXACHLOROBENZENE	430	UJ	420	U	420	UJ	390	UJ	390	UJ
PENTACHLOROPHENOL	1100	UJ	970	J	1100	J	980	UJ	980	UJ
PHENANTHRENE	620	J	1000		290	J	73	J	70	J
ANTHRACENE	160	J	310	J	83	J	390	UJ	390	UJ
CARBAZOLE	110	J	170	J	44	J	390	UJ	390	UJ
DI-N-BUTYLPHTHALATE	27	J	29	J	30	J	28	J	29	J
FLUORANTHENE	920	J	1300		440	J	150	J	190	J
PYRENE	880	J	2400		2100		130	J	150	J
BUTYLBENZYLPHTHALATE	430	UJ	420	U	420	U	390	UJ	390	UJ
3,3'-DICHLOROBENZIDINE	430	UJ	420	UJ	420	UJ	390	UJ	390	UJ
BENZO(A)ANTHRACENE	500	J	830		300	J	66	J	87	J
CHRYSENE	550	J	800		310	J	100	J	130	J
BIS(2-ETHYLHEXYL)PHTHALATE	430	U	420	U	420	U	390	U	390	U
DI-N-OCTYLPHTHALATE	120	J	80	J	91	J	390	UJ	28	J
BENZO(B)FLUORANTHENE	400	J	540	J	240	J	110	J	86	J
BENZO(K)FLUORANTHENE	270	J	380	J	200	J	47	J	89	J
BENZO(A)PYRENE	380	J	580	J	260	J	80	J	70	J
INDENO(1,2,3-CD)PYRENE	230	J	350	J	180	J	59	J	54	J
DIBENZ(A,H)ANTHRACENE	120	J	190	J	100	J	30	J	25	J
BENZO(G,H,I)PERYLENE	240	J	340	J	180	J	64	J	56	J

Case #: 27323 SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Lab. : SWOK
Reviewer :
Date :

Sample Number :	EAJM9		EAMJ8		EAMJ9		EAMK0		EARJ5	
Sampling Location :	SS8		SS9		SS10		SS11		SS18	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	15:45		15:55		14:55		15:05		15:35	
%Moisture :	25		40		12		16		11	
pH :	7.7		7.4		7.6		7.3		7.3	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	410	U	520	U	69	J	380	U	360	U
BIS(2-CHLOROETHYL)ETHER	410	U	520	UJ	360	UJ	380	UJ	360	UJ
2-CHLOROPHENOL	410	U	520	U	360	U	380	U	360	U
1,3-DICHLOROBENZENE	410	U	520	U	360	U	380	U	360	U
1,4-DICHLOROBENZENE	33	J	520	U	360	U	380	U	360	U
1,2-DICHLOROBENZENE	410	U	520	U	360	U	380	U	360	U
2-METHYLPHENOL	410	U	520	U	360	U	380	U	360	U
2,2'-OXYBIS(1-CHLOROPROPANE)	410	U	520	UJ	360	UJ	380	UJ	360	UJ
4-METHYLPHENOL	410	U	520	U	360	U	380	U	360	U
N-NITROSO-DI-N-PROPYLAMINE	410	U	520	UJ	360	UJ	380	UJ	360	UJ
HEXACHLOROETHANE	410	U	520	U	360	U	380	U	360	U
NITROBENZENE	410	U	520	U	360	U	380	U	360	U
ISOPHORONE	410	U	520	U	360	U	380	U	360	U
2-NITROPHENOL	410	U	520	U	360	U	380	U	360	U
2,4-DIMETHYLPHENOL	410	U	520	U	360	U	380	U	360	U
BIS(2-CHLOROETHOXY)METHANE	410	U	520	U	360	U	380	U	360	U
2,4-DICHLOROPHENOL	410	U	520	U	360	U	380	U	360	U
1,2,4-TRICHLOROBENZENE	410	U	520	U	360	U	380	U	360	U
NAPHTHALENE	410	U	520	U	360	U	380	U	79	J
4-CHLOROANILINE	410	U	520	U	360	U	380	U	360	U
HEXACHLOROBUTADIENE	410	U	520	UJ	360	UJ	380	UJ	360	UJ
4-CHLORO-3-METHYLPHENOL	410	U	520	U	360	U	380	U	360	U
2-METHYLNAPHTHALENE	410	U	520	U	360	U	380	U	190	J
HEXACHLOROCYCLOPENTADIENE	410	U	520	U	360	U	380	U	360	U
2,4,6-TRICHLOROPHENOL	410	U	520	U	360	U	380	U	360	U
2,4,5-TRICHLOROPHENOL	1000	U	1300	U	900	U	960	U	900	U
2-CHLORONAPHTHALENE	410	U	520	U	360	U	380	U	360	U
2-NITROANILINE	1000	U	1300	UJ	900	UJ	960	UJ	900	UJ
DIMETHYLPHTHALATE	410	U	520	U	360	U	380	U	360	U
ACENAPHTHYLENE	410	U	69	J	28	J	380	U	83	J
2,6-DINITROTOLUENE	410	UJ	520	U	360	U	380	U	360	U
3-NITROANILINE	1000	U	1300	U	900	U	960	U	900	U
ACENAPHTHENE	410	U	77	J	40	J	32	J	41	J

Case #: 27323
SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Lab. : SWOK
Reviewer :
Date :

Sample Number :	EAJM9		EAMJ8		EAMJ9		EAMK0		EARJ5	
Sampling Location :	SS8		SS9		SS10		SS11		SS18	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	15:45		15:55		14:55		15:05		15:35	
%Moisture :	25		40		12		16		11	
pH :	7.7		7.4		7.6		7.3		7.3	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	1000	R	1300	U	900	U	960	U	900	U
4-NITROPHENOL	1000	U	1300	U	900	U	960	U	900	U
DIBENZOFURAN	410	U	54	J	32	J	380	U	32	J
2,4-DINITROTOLUENE	410	U	520	U	360	U	380	U	360	U
DIETHYLPHTHALATE	410	U	520	U	360	U	380	U	360	U
4-CHLOROPHENYL-PHENYLETHER	410	U	520	U	360	U	380	U	360	U
FLUORENE	410	U	110	J	49	J	31	J	58	J
4-NITROANILINE	1000	U	1300	U	900	U	960	U	900	U
4,6-DINITRO-2-METHYLPHENOL	1000	R	1300	U	900	U	960	U	900	U
N-NITROSODIPHENYLAMINE	410	U	520	U	360	U	380	U	360	U
4-BROMOPHENYL-PHENYLETHER	410	U	520	U	360	U	380	U	360	U
HEXACHLOROBENZENE	410	U	520	U	360	U	380	U	360	U
PENTACHLOROPHENOL	1000	U	1300	U	900	U	960	U	900	U
PHENANTHRENE	410	U	1700		710		240	J	690	
ANTHRACENE	410	U	210	J	100	J	58	J	160	J
CARBAZOLE	410	U	290	J	120	J	45	J	84	J
DI-N-BUTYLPHTHALATE	410	U	54	J	60	J	47	J	60	J
FLUORANTHENE	410	U	3200		1400		420		1200	
PYRENE	410	U	2500		1000		330	J	1000	
BUTYLBENZYLPHTHALATE	410	U	520	U	360	U	380	U	360	U
3,3'-DICHLOROBENZIDINE	410	UJ	520	U	360	U	380	U	360	U
BENZO(A)ANTHRACENE	410	U	1000		470		190	J	630	
CHRYSENE	410	U	1700		720		210	J	730	
BIS(2-ETHYLHEXYL)PHTHALATE	410	U	520	U	360	U	380	U	360	U
DI-N-OCTYLPHTHALATE	410	U	520	U	360	U	380	U	360	U
BENZO(B)FLUORANTHENE	410	U	1700		660		220	J	660	
BENZO(K)FLUORANTHENE	410	U	1400		590		160	J	550	
BENZO(A)PYRENE	79	J	1400		600		220	J	640	
INDENO(1,2,3-CD)PYRENE	410	U	1100		450		140	J	450	
DIBENZ(A,H)ANTHRACENE	410	U	470	J	210	J	75	J	220	J
BENZO(G,H,I)PERYLENE	410	U	1100		460		150	J	470	

Case #: 27323 SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Lab. : SWOK
Reviewer :
Date :

Sample Number :	EARJ6		EARJ7		SBLK1		SBLK2			
Sampling Location :	SS19		SS20							
Matrix :	Soil		Soil		Soil		Soil			
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg			
Date Sampled :	08/24/1999		08/24/1999							
Time Sampled :	14:00		15:50							
%Moisture :	13		9		N/A		N/A			
pH :	7.2		7.2		7.0		7.0			
Dilution Factor :	1.0		1.0		1.0		1.0			
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	360	U	350	U	330	U	330	U		
BIS(2-CHLOROETHYL)ETHER	360	UJ	350	UJ	330	U	330	U		
2-CHLOROPHENOL	360	U	350	U	330	U	330	U		
1,3-DICHLOROBENZENE	360	U	350	U	330	U	330	U		
1,4-DICHLOROBENZENE	360	U	350	U	21	J	330	U		
1,2-DICHLOROBENZENE	360	U	350	U	330	U	330	U		
2-METHYLPHENOL	360	U	350	U	330	U	330	U		
2,2'-OXYBIS(1-CHLOROPROPANE)	360	UJ	350	UJ	330	U	330	U		
4-METHYLPHENOL	28	J	350	U	330	U	330	U		
N-NITROSO-DI-N-PROPYLAMINE	360	UJ	350	UJ	330	U	330	U		
HEXACHLOROETHANE	360	U	350	U	330	U	330	U		
NITROBENZENE	360	U	350	U	330	U	330	U		
ISOPHORONE	360	U	350	U	330	U	330	U		
2-NITROPHENOL	360	U	350	U	330	U	330	U		
2,4-DIMETHYLPHENOL	360	U	350	U	330	U	330	U		
BIS(2-CHLOROETHOXY)METHANE	360	U	350	U	330	U	330	U		
2,4-DICHLOROPHENOL	360	U	350	U	330	U	330	U		
1,2,4-TRICHLOROBENZENE	360	U	350	U	330	U	330	U		
NAPHTHALENE	360	U	350	U	330	U	330	U		
4-CHLOROANILINE	360	U	350	U	330	U	330	U		
HEXACHLOROBUTADIENE	360	UJ	350	UJ	330	U	330	U		
4-CHLORO-3-METHYLPHENOL	360	U	350	U	330	U	330	U		
2-METHYLNAPHTHALENE	360	U	350	U	330	U	330	U		
HEXACHLOROCYCLOPENTADIENE	360	U	350	U	330	U	330	U		
2,4,6-TRICHLOROPHENOL	360	U	350	U	330	U	330	U		
2,4,5-TRICHLOROPHENOL	920	U	870	U	830	U	830	U		
2-CHLORONAPHTHALENE	360	U	350	U	330	U	330	U		
2-NITROANILINE	920	UJ	870	UJ	830	U	830	U		
DIMETHYLPHTHALATE	360	U	350	U	330	U	330	U		
ACENAPHTHYLENE	40	J	350	U	330	U	330	U		
2,6-DINITROTOLUENE	360	U	350	U	330	U	330	UJ		
3-NITROANILINE	920	U	870	U	830	U	830	U		
ACENAPHTHENE	360	U	350	U	330	U	330	U		

Case #: 27323
SDG : EAGR3
Site :
PLYMOUTH/ HAGGERTY
Lab. :
SWOK
Reviewer :
Date :

Sample Number :	EARJ6		EARJ7		SBLK1		SBLK2			
Sampling Location :	SS19		SS20							
Matrix :	Soil		Soil		Soil		Soil			
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg			
Date Sampled :	08/24/1999		08/24/1999							
Time Sampled :	14:00		15:50							
%Moisture :	13		9		N/A		N/A			
pH :	7.2		7.2		7.0		7.0			
Dilution Factor :	1.0		1.0		1.0		1.0			
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	920	U	870	U	830	U	830	R		
4-NITROPHENOL	920	U	870	U	830	U	830	U		
DIBENZOFURAN	360	U	350	U	330	U	330	U		
2,4-DINITROTOLUENE	360	U	350	U	330	U	330	U		
DIETHYLPHTHALATE	360	U	350	U	330	U	330	U		
4-CHLOROPHENYL-PHENYLETHER	360	U	350	U	330	U	330	U		
FLUORENE	360	U	350	U	330	U	330	U		
4-NITROANILINE	920	U	870	U	830	U	830	U		
4,6-DINITRO-2-METHYLPHENOL	920	U	870	U	830	U	830	R		
N-NITROSODIPHENYLAMINE	360	U	350	U	330	U	330	U		
4-BROMOPHENYL-PHENYLETHER	360	U	350	U	330	U	330	U		
HEXACHLOROBENZENE	360	U	350	U	330	U	330	U		
PENTACHLOROPHENOL	920	U	870	U	830	U	830	U		
PHENANTHRENE	210	J	110	J	330	U	330	U		
ANTHRACENE	59	J	25	J	330	U	330	U		
CARBAZOLE	39	J	24	J	330	U	330	U		
DI-N-BUTYLPHTHALATE	74	J	33	J	330	U	330	U		
FLUORANTHENE	500		230	J	330	U	330	U		
PYRENE	400		200	J	330	U	330	U		
BUTYLBENZYLPHTHALATE	360	U	350	U	330	U	330	U		
3,3'-DICHLOROBENZIDINE	360	U	350	U	330	U	330	UJ		
BENZO(A)ANTHRACENE	210	J	110	J	330	U	330	U		
CHRYSENE	300	J	160	J	330	U	330	U		
BIS(2-ETHYLHEXYL)PHTHALATE	550	U	350	U	190	J	81	J		
DI-N-OCTYLPHTHALATE	62	J	350	U	330	U	330	U		
BENZO(B)FLUORANTHENE	360		170	J	330	U	330	U		
BENZO(K)FLUORANTHENE	170	J	72	J	330	U	330	U		
BENZO(A)PYRENE	230	J	120	J	330	U	330	U		
INDENO(1,2,3-CD)PYRENE	190	J	88	J	330	U	330	U		
DIBENZ(A,H)ANTHRACENE	86	J	45	J	330	U	330	U		
BENZO(G,H,I)PERYLENE	190	J	94	J	330	U	330	U		

Case #: 27323
Site :
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SDG : EAGR3
PLYMOUTH/ HAGGERTY
SWOK

Analytical Results (Qualified Data)

Number of Soil Samples : 20
Number of Water Samples : 0

Sample Number :	EAGR3		EAGR3DL		EAGR4		EAGR5		EAGR6	
Sampling Location :	SD2		SD2		SD3		SD1		SD4	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	10:50		10:50		13:35		11:30		15:10	
%Moisture :	19		19		27		26		46	
pH :	5.9		5.9		7.4		7.3		7.2	
Dilution Factor :	10.0		100.0		1.0		1.0		1.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	21	U	210	U	2.2	U	2.2	U	3.1	U
BETA-BHC	21	U	210	U	2.2	U	2.2	U	3.1	U
DELTA-BHC	21	U	210	U	2.2	U	2.2	U	3.1	U
GAMMA-BHC (LINDANE)	21	U	210	U	2.2	U	2.2	U	3.1	U
HEPTACHLOR	21	U	210	U	1.3	J	2.1	J	31	
ALDRIN	21	U	210	U	2.2	U	2.2	U	2.2	J
HEPTACHLOR EPOXIDE	21	U	210	U	2.2	U	2.2	U	3.1	J
ENDOSULFAN I	21	U	210	U	2.2	U	2.2	U	3.1	U
DIELDRIN	40	U	400	U	4.3	U	4.2	U	6.0	U
4,4'-DDE	10	J	400	U	5.8		24		30	J
ENDRIN	40	U	400	U	4.3	U	4.2	U	6.0	U
ENDOSULFAN II	40	U	400	U	4.3	U	4.2	U	6.0	U
4,4'-DDD	40	U	400	U	1.7	J	4.2	U	5.1	J
ENDOSULFAN SULFATE	40	U	400	U	4.3	U	4.2	U	6.0	U
4,4'-DDT	40	R	400	U	2.8	J	14	J	27	J
METHOXYCHLOR	210	UJ	2100	U	22	U	22	U	31	UJ
ENDRIN KETONE	40	U	400	U	4.3	U	4.2	U	6.0	U
ENDRIN ALDEHYDE	40	U	400	U	4.3	U	4.2	U	6.0	U
ALPHA-CHLORDANE	26	J	210	U	0.87	J	2.3	J	3.1	U
GAMMA-CHLORDANE	16	J	210	U	0.70	J	1.0	J	3.1	U
TOXAPHENE	2100	U	21000	U	220	U	220	U	310	U
AROCLOR-1016	400	U	4000	U	43	U	42	U	60	U
AROCLOR-1221	810	U	8100	U	88	U	86	U	120	U
AROCLOR-1232	400	U	4000	U	43	U	42	U	60	U
AROCLOR-1242	400	U	4000	U	43	U	42	U	60	U
AROCLOR-1248	400	U	4000	U	43	U	42	U	60	U
AROCLOR-1254	400	U	4000	U	43	U	42	U	60	U
AROCLOR-1260	400	U	4000	U	43	U	42	U	60	U

Case #: 27323
Site :
Lab. :
Reviewer :
Date :

SDG : EAGR3
PLYMOUTH/ HAGGERTY
SWOK

Sample Number :	EAGR6DL		EAHZ3		EAHZ3DL		EAHZ4		EAHZ4DL	
Sampling Location :	SD4		SS12		SS12		SS13		SS13	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	15:10		12:20		12:20		13:45		13:45	
%Moisture :	46		20		20		14		14	
pH :	7.2		7.4		7.4		7.5		7.5	
Dilution Factor :	10.0		1.0		10.0		2.0		20.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	31	U	2.1	U	21	U	3.9	U	39	U
BETA-BHC	31	U	2.1	U	21	U	3.9	U	39	U
DELTA-BHC	31	U	2.1	U	21	U	3.9	U	39	U
GAMMA-BHC (LINDANE)	31	U	2.1	U	21	U	3.9	U	39	U
HEPTACHLOR	42	J	2.6	J	21	U	3.9	U	39	U
ALDRIN	31	U	0.46	J	21	U	3.9	U	39	U
HEPTACHLOR EPOXIDE	31	U	2.1	U	21	U	3.9	U	39	U
ENDOSULFAN I	31	U	2.1	U	21	U	3.9	U	39	U
DIELDRIN	60	U	4.1	U	41	U	7.5	U	75	U
4,4'-DDE	40	J	340	J	280		290	J	240	J
ENDRIN	60	U	4.1	U	41	U	7.5	U	75	U
ENDOSULFAN II	60	U	4.1	U	41	U	7.5	U	75	U
4,4'-DDD	60	U	11		7.7	J	10	J	16	J
ENDOSULFAN SULFATE	60	U	4.1	U	41	U	7.5	U	75	U
4,4'-DDT	31	J	74	J	87		95	J	98	J
METHOXYCHLOR	310	U	21	UJ	210	U	39	UJ	390	U
ENDRIN KETONE	60	U	4.1	U	41	U	7.5	U	75	U
ENDRIN ALDEHYDE	60	U	4.1	U	41	U	7.5	U	75	U
ALPHA-CHLORDANE	31	U	2.1	U	21	U	3.9	U	39	U
GAMMA-CHLORDANE	31	U	2.1	U	21	U	3.9	U	39	U
TOXAPHENE	3100	U	210	U	2100	U	390	U	3900	U
AROCLOR-1016	600	U	41	U	410	U	75	U	750	U
AROCLOR-1221	1200	U	83	U	830	U	150	U	1500	U
AROCLOR-1232	600	U	41	U	410	U	75	U	750	U
AROCLOR-1242	600	U	41	U	410	U	75	U	750	U
AROCLOR-1248	600	U	41	U	410	U	75	U	750	U
AROCLOR-1254	600	U	41	U	410	U	75	U	750	U
AROCLOR-1260	600	U	41	U	410	U	75	U	750	U

Case #: 27323
SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Lab. : SWOK
Reviewer :
Date :

Sample Number :	EAHZ5		EAHZ5DL		EAHZ6		EAHZ6DL		EAHZ7	
Sampling Location :	SS14		SS14		SS15		SS15		SS16	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	13:25		13:25		13:10		13:10		14:10	
%Moisture :	17		17		11		11		9	
pH :	7.4		7.4		7.4		7.4		7.3	
Dilution Factor :	1.0		100.0		1.0		50.0		1.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	2.0	U	200	U	1.8	U	90	U	1.9	U
BETA-BHC	2.0	U	200	U	1.8	U	90	U	1.9	U
DELTA-BHC	2.0	U	200	U	9.0		90	U	1.9	U
GAMMA-BHC (LINDANE)	2.0	U	200	U	1.8	U	90	U	1.9	U
HEPTACHLOR	2.0	U	700	J	13		90	U	2.5	J
ALDRIN	30	J	56	J	1.8	U	90	U	1.9	U
HEPTACHLOR EPOXIDE	38	J	69	J	1.8	U	90	U	1.9	U
ENDOSULFAN I	2.0	U	200	U	1.8	U	90	U	1.9	U
DIELDRIN	3.8	U	380	U	3.5	U	170	U	1.2	J
4,4'-DDE	200	J	110	J	390	J	720		110	
ENDRIN	3.8	U	380	U	3.5	U	170	U	3.6	U
ENDOSULFAN II	3.8	U	380	U	3.5	U	170	U	3.6	U
4,4'-DDD	14	J	380	U	38	J	26	J	12	
ENDOSULFAN SULFATE	3.8	U	380	U	3.5	U	170	U	3.6	U
4,4'-DDT	62	J	61	J	450	J	400		89	J
METHOXYCHLOR	20	UJ	2000	U	7.7	J	900	U	19	UJ
ENDRIN KETONE	1.6	J	380	U	3.5	U	170	U	3.6	U
ENDRIN ALDEHYDE	27	J	380	U	3.5	U	170	U	3.6	U
ALPHA-CHLORDANE	2.0	U	200	U	1.8	U	90	U	1.9	U
GAMMA-CHLORDANE	6.5	J	200	U	1.8	U	90	U	1.9	U
TOXAPHENE	200	U	20000	U	180	U	9000	U	190	U
AROCLOR-1016	38	U	3800	U	35	U	1700	U	36	U
AROCLOR-1221	77	U	7700	U	70	U	3500	U	73	U
AROCLOR-1232	38	U	3800	U	35	U	1700	U	36	U
AROCLOR-1242	38	U	3800	U	35	U	1700	U	36	U
AROCLOR-1248	38	U	3800	U	35	U	1700	U	36	U
AROCLOR-1254	38	U	3800	U	35	U	1700	U	36	U
AROCLOR-1260	38	U	3800	U	35	U	1700	U	36	U

Case #: 27323
Site :
Lab. :
Reviewer :
Date :

SDG : EAGR3
PLYMOUTH/ HAGGERTY
SWOK

Sample Number :	EAHZ7DL		EAHZ8		EAHZ8DL		EAJE6		EAJE6DL	
Sampling Location :	SS16		SS17		SS17		SB4		SB4	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	14:10		15:25		15:25		12:10		12:10	
%Moisture :	9		9		9		16		16	
pH :	7.3		7.2		7.2		7.2		7.2	
Dilution Factor :	10.0		2.0		20.0		1.0		10.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	19	U	3.6	U	36	U	1.9	U	19	U
BETA-BHC	19	U	3.6	U	36	U	1.9	U	19	U
DELTA-BHC	19	U	3.6	U	36	U	1.9	U	19	U
GAMMA-BHC (LINDANE)	19	U	3.6	U	36	U	1.9	U	19	U
HEPTACHLOR	19	U	3.6	U	36	U	0.89	J	19	U
ALDRIN	19	U	3.6	U	36	U	1.9	U	19	U
HEPTACHLOR EPOXIDE	19	U	3.6	U	36	U	1.9	U	19	U
ENDOSULFAN I	19	U	3.6	U	36	U	1.9	U	19	U
DIELDRIN	36	U	7.0	U	70	U	3.7	U	37	U
4,4'-DDE	100		18	J	2.7	J	7.3		8.5	J
ENDRIN	36	U	13	J	70	U	3.7	U	37	U
ENDOSULFAN II	36	U	7.0	U	70	U	3.7	U	37	U
4,4'-DDD	36	U	10	J	70	U	1.1	J	37	U
ENDOSULFAN SULFATE	36	U	7.0	U	70	U	3.7	U	37	U
4,4'-DDT	100		29	J	70	U	6.1	J	6.9	J
METHOXYCHLOR	190	U	180	J	360	U	19	UJ	190	U
ENDRIN KETONE	36	U	7.0	U	70	U	3.7	U	37	U
ENDRIN ALDEHYDE	36	U	9.3	J	70	U	3.7	U	37	U
ALPHA-CHLORDANE	19	U	3.6	U	36	U	1.9	U	19	U
GAMMA-CHLORDANE	19	U	3.6	U	36	U	1.9	U	19	U
TOXAPHENE	1900	U	360	U	3600	U	190	U	1900	U
AROCLOR-1016	360	U	70	U	700	U	37	U	370	U
AROCLOR-1221	730	U	140	U	1400	U	76	U	760	U
AROCLOR-1232	360	U	70	U	700	U	37	U	370	U
AROCLOR-1242	360	U	70	U	700	U	37	U	370	U
AROCLOR-1248	360	U	70	U	700	U	37	U	370	U
AROCLOR-1254	360	U	70	U	700	U	37	U	370	U
AROCLOR-1260	360	U	70	U	700	U	37	U	370	U

Case #: 27323
SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Lab. : SWOK
Reviewer :
Date :

Sample Number :	EAJM7		EAJM7DL		EAJM7MS		EAJM7MSD		EAJM8	
Sampling Location :	SS6		SS6		SS6		SS6		SS7	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	12:25		12:25		12:25		12:25		12:35	
%Moisture :	24		24		24		24		19	
pH :	7.4		7.4		7.4		7.4		7.9	
Dilution Factor :	1.0		10.0		1.0		1.0		10.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	2.2	U	22	U	2.0	U	2.2	U	20	UJ
BETA-BHC	2.2	U	22	U	2.0	U	2.2	U	20	UJ
DELTA-BHC	2.2	U	22	U	2.0	U	2.2	U	20	UJ
GAMMA-BHC (LINDANE)	2.2	UJ	22	U	7.1	J	8.4		20	UJ
HEPTACHLOR	1.6	J	22	U	11	J	11		20	UJ
ALDRIN	2.2	UJ	22	U	6.7	J	7.5	J	20	UJ
HEPTACHLOR EPOXIDE	2.2	U	22	U	2.0	U	2.2	U	20	UJ
ENDOSULFAN I	2.2	U	22	U	2.0	U	2.2	U	20	UJ
DIELDRIN	4.3	U	43	U	16	J	19		6.0	J
4,4'-DDE	21	J	21	J	16	J	15	J	780	J
ENDRIN	4.3	U	43	U	22	J	24		39	UJ
ENDOSULFAN II	4.3	U	43	U	4.0	U	4.2	U	39	UJ
4,4'-DDD	8.5	J	7.1	J	8.5	J	9.0	J	70	J
ENDOSULFAN SULFATE	1.3	J	43	U	1.5	J	4.2	U	39	UJ
4,4'-DDT	4.2	J	5.5	J	15	J	17	J	390	J
METHOXYCHLOR	22	UJ	220	U	20	UJ	22	UJ	21	J
ENDRIN KETONE	2.1	J	43	U	4.0	U	4.2	U	39	UJ
ENDRIN ALDEHYDE	4.3	U	43	U	4.0	U	4.2	U	39	UJ
ALPHA-CHLORDANE	2.2	U	22	U	2.0	U	2.2	U	20	UJ
GAMMA-CHLORDANE	2.2	U	22	U	2.0	U	2.2	U	20	UJ
TOXAPHENE	220	U	2200	U	200	U	220	U	2000	UJ
AROCLOR-1016	43	U	430	U	40	U	42	U	390	UJ
AROCLOR-1221	87	U	870	U	81	U	86	U	800	UJ
AROCLOR-1232	43	U	430	U	40	U	42	U	390	UJ
AROCLOR-1242	43	U	430	U	40	U	42	U	390	UJ
AROCLOR-1248	43	U	430	U	40	U	42	U	390	UJ
AROCLOR-1254	43	U	430	U	40	U	42	U	390	UJ
AROCLOR-1260	43	U	430	U	40	U	42	U	390	UJ

Case #: 27323
SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Lab. : SWOK
Reviewer :
Date :

Sample Number :	EAJM8DL		EAJM9		EAMJ8		EAMJ8DL		EAMJ9	
Sampling Location :	SS7		SS8		SS9		SS9		SS10	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	12:35		15:45		15:55		15:55		14:55	
%Moisture :	19		25		40		40		12	
pH :	7.9		7.7		7.4		7.4		7.6	
Dilution Factor :	50.0		1.0		1.0		10.0		1.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	100	UJ	2.1	U	1.6	J	28	U	1.7	U
BETA-BHC	100	UJ	2.1	U	2.8	U	28	U	1.7	U
DELTA-BHC	100	UJ	2.1	U	2.8	U	28	U	1.7	U
GAMMA-BHC (LINDANE)	100	UJ	2.1	U	2.8	U	13	J	1.7	U
HEPTACHLOR	100	UJ	5.1	J	4.3	J	17	J	1.7	U
ALDRIN	100	UJ	2.1	U	2.8	U	11	J	1.7	U
HEPTACHLOR EPOXIDE	100	UJ	2.1	U	4.5	J	28	U	1.7	U
ENDOSULFAN I	100	UJ	2.1	U	2.8	U	28	U	1.7	U
DIELDRIN	200	UJ	4.1	U	5.4	U	26	J	3.4	U
4,4'-DDE	2000	J	4.1	U	65	J	25	J	37	J
ENDRIN	200	UJ	4.1	U	5.4	U	35	J	3.4	U
ENDOSULFAN II	200	UJ	4.1	U	4.4	J	54	U	3.4	U
4,4'-DDD	180	J	4.1	U	19	J	9.4	J	12	J
ENDOSULFAN SULFATE	200	UJ	4.1	U	5.4	U	54	U	3.4	U
4,4'-DDT	1100	J	4.1	U	20	J	32	J	13	J
METHOXYCHLOR	1000	UJ	21	U	28	UJ	280	U	18	J
ENDRIN KETONE	200	UJ	4.1	U	5.4	U	54	U	3.4	U
ENDRIN ALDEHYDE	200	UJ	4.1	U	5.4	U	54	U	3.4	U
ALPHA-CHLORDANE	100	UJ	0.82	J	84	J	28	U	17	J
GAMMA-CHLORDANE	100	UJ	1.2	J	46	J	28	U	11	
TOXAPHENE	10000	UJ	210	U	280	U	2800	U	170	U
AROCLOR-1016	2000	UJ	41	U	54	U	540	U	34	U
AROCLOR-1221	4000	UJ	84	U	110	U	1100	U	68	U
AROCLOR-1232	2000	UJ	41	U	54	U	540	U	34	U
AROCLOR-1242	2000	UJ	41	U	54	U	540	U	34	U
AROCLOR-1248	2000	UJ	41	U	54	U	540	U	34	U
AROCLOR-1254	2000	UJ	41	U	54	U	540	U	34	U
AROCLOR-1260	2000	UJ	41	U	54	U	540	U	34	U

Analytical Results (Qualified Data)

Case #: 27323
SDG : EAGR3
Site :
PLYMOUTH/ HAGGERTY
Lab. :
SWOK
Reviewer :
Date :

Sample Number :	EAMJ9DL		EAMK0		EAMK0DL		EARJ5		EARJ5DL	
Sampling Location :	SS10		SS11		SS11		SS18		SS18	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled :	14:55		15:05		15:05		15:35		15:35	
%Moisture :	12		16		16		11		11	
pH :	7.6		7.3		7.3		7.3		7.3	
Dilution Factor :	10.0		1.0		10.0		1.0		100.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	17	U	1.8	U	18	U	1.8	U	180	U
BETA-BHC	17	U	1.8	U	18	U	1.8	U	180	U
DELTA-BHC	17	U	1.8	U	18	U	1.8	U	180	U
GAMMA-BHC (LINDANE)	17	U	1.8	U	18	U	1.8	U	180	U
HEPTACHLOR	17	U	2.4		18	U	45	J	56	J
ALDRIN	17	U	1.8	U	18	U	2.9	J	180	U
HEPTACHLOR EPOXIDE	6.1	J	1.8	U	18	U	0.79	J	180	U
ENDOSULFAN I	17	U	1.8	U	18	U	1.8	U	180	U
DIELDRIN	34	U	3.6	U	36	U	3.6	U	360	U
4,4'-DDE	52	J	200		130		22	J	27	J
ENDRIN	34	U	3.6	U	36	U	3.6	U	360	U
ENDOSULFAN II	34	U	3.5	J	4.1	J	1.5	J	360	U
4,4'-DDD	13	J	16		14	J	7.3	J	360	U
ENDOSULFAN SULFATE	34	U	3.6	U	36	U	3.6	U	360	U
4,4'-DDT	19	J	48	J	61		24	J	360	U
METHOXYCHLOR	170	U	18	UJ	180	U	32	J	1800	U
ENDRIN KETONE	34	U	3.6	U	36	U	3.6	U	360	U
ENDRIN ALDEHYDE	34	U	3.6	U	36	U	2.5	J	360	U
ALPHA-CHLORDANE	66	J	1.8	U	18	U	1.8	U	180	U
GAMMA-CHLORDANE	34	J	1.8	U	18	U	1.2	J	180	U
TOXAPHENE	1700	U	180	U	1800	U	180	U	18000	U
AROCLOR-1016	340	U	36	U	360	U	36	U	3600	U
AROCLOR-1221	680	U	73	U	730	U	73	U	7300	U
AROCLOR-1232	340	U	36	U	360	U	36	U	3600	U
AROCLOR-1242	340	U	36	U	360	U	36	U	3600	U
AROCLOR-1248	340	U	36	U	360	U	36	U	3600	U
AROCLOR-1254	340	U	36	U	360	U	36	U	3600	U
AROCLOR-1260	340	U	36	U	360	U	36	U	3600	U

Case #: 27323
SDG : EAGR3
Site :
PLYMOUTH/ HAGGERTY
Lab. :
SWOK
Reviewer :
Date :

Sample Number :	EARJ6		EARJ6DL		EARJ7		EARJ7DL		PBLKSA	
Sampling Location :	SS19		SS19		SS20		SS20			
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :	08/24/1999		08/24/1999		08/24/1999		08/24/1999			
Time Sampled :	14:00		14:00		15:50		15:50			
%Moisture :	13		13		9		9		N/A	
pH :	7.2		7.2		7.2		7.2		7.0	
Dilution Factor :	1.0		10.0		1.0		10.0		1.0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	1.9	U	19	U	1.8	UJ	18	U	1.7	U
BETA-BHC	1.9	U	19	U	1.8	UJ	18	U	1.7	U
DELTA-BHC	1.9	U	19	U	1.8	UJ	18	U	1.7	U
GAMMA-BHC (LINDANE)	1.9	U	19	U	1.8	UJ	18	U	1.7	U
HEPTACHLOR	2.8		19	U	1.8	UJ	18	U	1.7	U
ALDRIN	1.9	U	19	U	1.8	UJ	18	U	1.7	U
HEPTACHLOR EPOXIDE	1.9	U	19	U	1.8	UJ	18	U	1.7	U
ENDOSULFAN I	1.9	U	19	U	1.8	UJ	18	U	1.7	U
DIELDRIN	3.7	U	37	U	3.5	UJ	35	U	3.3	U
4,4'-DDE	300	J	300		41	J	50	J	3.3	U
ENDRIN	3.7	U	37	U	3.5	UJ	35	U	3.3	U
ENDOSULFAN II	3.7	U	37	U	3.5	UJ	35	U	3.3	U
4,4'-DDD	29	J	16	J	5.0	J	35	U	3.3	U
ENDOSULFAN SULFATE	3.7	U	37	U	3.5	UJ	35	U	3.3	U
4,4'-DDT	88	J	140		17	J	27	J	3.3	U
METHOXYCHLOR	22	J	190	U	6.2	J	180	U	17	U
ENDRIN KETONE	3.7	U	37	U	3.5	UJ	35	U	3.3	U
ENDRIN ALDEHYDE	3.0	J	37	U	0.97	J	35	U	3.3	U
ALPHA-CHLORDANE	5.2	J	7.0	J	1.8	UJ	18	U	1.7	U
GAMMA-CHLORDANE	2.0	J	19	U	1.8	UJ	18	U	1.7	U
TOXAPHENE	190	U	1900	U	180	UJ	1800	U	170	U
AROCLOR-1016	37	U	370	U	35	UJ	350	U	33	U
AROCLOR-1221	76	U	760	U	71	UJ	710	U	67	U
AROCLOR-1232	37	U	370	U	35	UJ	350	U	33	U
AROCLOR-1242	37	U	370	U	35	UJ	350	U	33	U
AROCLOR-1248	37	U	370	U	35	UJ	350	U	33	U
AROCLOR-1254	37	U	370	U	35	UJ	350	U	33	U
AROCLOR-1260	37	U	370	U	35	UJ	350	U	33	U

Case #: 27323 SDG : EAGR3
Site : PLYMOUTH/ HAGGERTY
Lab. : SWOK
Reviewer :
Date :

Sample Number :	PBLKSB		PBLKSH							
Sampling Location :										
Matrix :	Soil		Soil							
Units :	ug/Kg		ug/Kg							
Date Sampled :										
Time Sampled :										
%Moisture :	N/A		N/A							
pH :	7.0		7.0							
Dilution Factor :	1.0		1.0							
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	1.7	U	1.7	U						
BETA-BHC	1.7	U	1.7	U						
DELTA-BHC	1.7	U	1.7	U						
GAMMA-BHC (LINDANE)	1.7	U	1.7	U						
HEPTACHLOR	1.7	U	1.7	U						
ALDRIN	1.7	U	1.7	U						
HEPTACHLOR EPOXIDE	1.7	U	1.7	U						
ENDOSULFAN I	1.7	U	1.7	U						
DIELDRIN	3.3	U	3.3	U						
4,4'-DDE	3.3	U	3.3	U						
ENDRIN	3.3	U	3.3	U						
ENDOSULFAN II	3.3	U	3.3	U						
4,4'-DDD	3.3	U	3.3	U						
ENDOSULFAN SULFATE	3.3	U	3.3	U						
4,4'-DDT	3.3	U	3.3	U						
METHOXYCHLOR	17	U	17	U						
ENDRIN KETONE	3.3	U	3.3	U						
ENDRIN ALDEHYDE	3.3	U	3.3	U						
ALPHA-CHLORDANE	1.7	U	1.7	U						
GAMMA-CHLORDANE	1.7	U	1.7	U						
TOXAPHENE	170	U	170	U						
AROCLOR-1016	33	U	33	U						
AROCLOR-1221	67	U	67	U						
AROCLOR-1232	33	U	33	U						
AROCLOR-1242	33	U	33	U						
AROCLOR-1248	33	U	33	U						
AROCLOR-1254	33	U	33	U						
AROCLOR-1260	33	U	33	U						

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: EAGR3 CERCLIS No: 72

Case No: 27323 Site Name Location: Plymouth | Haggerty

Contractor or EPA Lab: SWOL Data User: MDEQ

No. of Samples: 20 Date Sampled or Data Received: 10-4-99

Have Chain-of-Custody records been received? Yes ✓ No ____
Have traffic reports or packing lists been received? Yes ✓ No ____
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ____ No ____
If no, which traffic report or packing list numbers are missing?

____ ____ ____ ____

____ ____ ____ ____

Are basic data forms in? Yes ✓ No ____
No of samples claimed: 20 No. of samples received: 20

Received by: Stephanie Tobin Date: 10-4-99

Received by LSSS: Stephanie Tobin Date: 10-4-99

Review started: 10-18-99 Reviewer Signature: M Kamuda

Total time spent on review: 17 Date review completed: 10-27-99

Copied by: Lynette Burnett Date: 11-19-99

Mailed to user by: Lynette Burnett Date: 11-19-99

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if o
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if o
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if o
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if o

PROBLEMS: Please indicate reasons why data are not suitable for you uses.

_____

_____

Received by Data Mgmt. Coordinator for Files. Data: _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 10/8/99

SUBJECT: **Review of Data**
Received for review on 9/23/99

FROM: **Stephen L. Ostrodka, Chief (SRT-4J)** /LF
Superfund Technical Support Section

TO: **Data User:** MDEQ

We have reviewed the data by CADRE for the following case:

SITE NAME: Plymouth/Haggerty

ASE NUMBER: 27323 **SDG NUMBER:** MECBJ9

Number and Type of Samples: 6 waters

Sample Numbers: MECBJ9, MECBK0-4

Laboratory: Sentinel Hrs. for Review: 4.5 +0.5

Following are our findings:
All data are usable with the qualifications described in the attached narrative.

CC: Cecilia Luckett
Region 5 TPO
Mail Code: SM-5J

L. Finkelberg
10-18-99

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Six (6) water samples, numbered MECBJ9, MECBK0-4, were collected on 8/24/99. The lab received the samples on 8/25/99 in good condition. All samples were analyzed for metals and cyanide. All samples were analyzed using the CLP SOW ILM040.0 analysis procedures.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using the MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectometric procedure.

Errors were found and corrected by this reviewer on Forms I and III.

Reviewed by: Stephen Connet
Date: 10/8/99

1. HOLDING TIME:

HOLDING TIME CRITERIA

---Inorganic---

	-- Holding Time --		------- pH -------	
	Primary	Expanded	Primary	Expanded
Metals	180	0	2.0	0.0
Mercury	28	0	2.0	0.0
Cyanide	14	0	12.0	0.0

No problems were found for this qualification.

2. CALIBRATIONS:

CALIBRATION CRITERIA

---Inorganic---

Percent Recovery Limits

	--- Primary ---		-- Expanded ---	
	Low	High	Low	High
Cyanide	85.00	115.00	70.00	130.00
AA	90.00	110.00	75.00	125.00
ICP	90.00	110.00	75.00	125.00
Mercury	80.00	120.00	65.00	135.00

No problems were found for this qualification.

3. BLANKS:

LABORATORY BLANKS CRITERIA

DC-283: The following inorganic samples are associated with a negative blank concentration whose absolute value is greater than the instrument detection limit (IDL). The sample concentration is greater than the IDL and less than five times the absolute value of the blank concentration. These hits are qualified "J". Some non-detect concentration readings are sufficiently high that the negative blank reading may have caused the IDL to

be elevated. These non-detects are qualified "UJ".

Lead
MECBJ9, MECBK0, MECBK1, MECBK3

Cyanide
MECBJ9, MECBK0, MECBK1, MECBK2, MECBK4

DC-284: The following inorganic samples are associated with a calibration, field, trip, bottle, or equipment blank concentration which is greater than the instrument detection limit (IDL). The sample concentration is also greater than the IDL and less than five times the blank concentration. Sample MECBK4 is a field blank. Hits are qualified "J".

Beryllium
MECBK2

Cadmium
MECBK0, MECBK1

Chromium
MECBK0, MECBK1, MECBK2, MECBK3

Lead
MECBJ9, MECBK0, MECBK3

Mercury
MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

Potassium
MECBK4

Thallium
MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

Cyanide
MECBJ9, MECBK0, MECBK1, MECBK2, MECBK4

DC-338: During review of the following inorganic samples, the reported IDL/default CRDL value was used for cyanide.
MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

Reviewed by: Stephen Connet
Date: 10/8/99

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

MATRIX SPIKE CRITERIA

---Inorganic---

Percent Recovery Limits	
Upper	125.0
Lower	75.0
Extreme lower	30.0

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low (30-74 %) indicating that sample results may be biased low.
Hits are qualified "J" and non-detects are qualified "UJ".

Antimony
MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

No problems were found for the laboratory control sample.

5. LABORATORY AND FIELD DUPLICATE:

The following inorganic samples are associated with field duplicate sample results which did not meet relative percent difference (RPD) criteria. Field duplicate samples are MECBK0 and MECBK3.
All associated data are estimated "J".

Iron
MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

Manganese
MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

Calcium
MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

Sodium
MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

Reviewed by: Stephen Connet
Date: 10/8/99

The following inorganic samples are associated with field duplicate sample results which did not meet absolute difference criteria. Field duplicate samples are MECBK0 and MECBK3.

All associated data are estimated "J".

Aluminum

MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

Copper

MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

Potassium

MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

Zinc

MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

6. ICP ANALYSIS:

DC-294: The analyte concentration is high (>50 X the IDL) and serial dilution percent difference is not in control (>10%).

All associated data are estimated "J".

Potassium

MECBJ9, MECBK0, MECBK1, MECBK2, MECBK3, MECBK4

7. GFAA ANALYSIS:

No GFAA analyses were performed for this case.

8. SAMPLE RESULTS:

All data, except those qualified above, are acceptable.

Reviewed by: Stephen Connet
Date: 10/8/99

Case: 29323 SDG: MECBJ9
Site: Plymouth/Haggerty Laboratory: Sentinel

CADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of the quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. (The compound may or may not be present)

Reviewed by: Stephen Connet
Date: 10/8/99

Analytical Results (Qualified Data)

Case # 27323 SDG MECBJ9

Site PLYMOUTH/ HAGGERTY

Lab SENTIN

Reviewer S CONNET

Date 10/8/99

Number of Soil Samples 0

Number of Water Samples 6

Sample Number	MECBJ9		MECBK0		MECBK1		MECBK2		MECBK3	
Sampling Location	SW1		SW2		SW3		SW4		SW2D	
Matrix	Water		Water		Water		Water		Water	
Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	11 40		10 35		13 30		15 05		10 35	
%Solids	0 0		0 0		0 0		0 0		0 0	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	216	J	810	J	808	J	525	J	277	J
ANTIMONY	2.2	UJ	2.2	UJ	2 2	UJ	2 2	UJ	2.2	UJ
ARSENIC	2.1	U	2 1	U	2 1	U	2 1	U	2 1	U
BARIUM	173		177		138		156		189	
BERYLLIUM	0 10	U	0 10	U	0 10	U	0 20	J	0 10	U
CADMIUM	3 6		0 45	J	1 0	J	16.9		3 7	
CALCIUM	205000	J	163000	J	190000	J	309000	J	222000	J
CHROMIUM	0 30	U	1 4	J	0 70	J	0 80	J	0.40	J
COBALT	0 60	U	0 60	U	1 2		0 70		0 60	U
COPPER	23 2	J	76.0	J	7 3	J	73.4	J	24 1	J
IRON	1060	J	1670	J	1480	J	1520	J	1050	J
LEAD	5 5	J	2 5	J	1.0	UJ	44 3		5 5	J
MAGNESIUM	37000		37100		44700		66100		39600	
MANGANESE	186	J	93 8	J	85 4	J	174	J	177	J
MERCURY	0 16	J	0 16	J	0 17	J	0 19	J	0 17	J
NICKEL	12 5		4 8		4 4		30 4		13 7	
POTASSIUM	18000	J	9540	J	28400	J	29500	J	20300	J
SELENIUM	4.2		2 1		6 9		5 0		3 9	
SILVER	0 40	U	0 40	U	0 40	U	0 40	U	0 40	U
SODIUM	381000	J	268000	J	456000	J	477000	J	417000	J
THALLIUM	4 4	J	2 1	J	4 2	J	3 5	J	3 8	J
VANADIUM	1 7		2 4		2 0		1 3		1 8	
ZINC	340	J	49 6	J	21 0	J	2780	J	343	J
CYANIDE	2.5	J	1.2	J	1 8	J	1 1	J	0 90	U

Case # 27323 SDG MECBJ9

Site PLYMOUTH/ HAGGERTY

Lab . SENTIN

Reviewer S CONNET

Date 10/8/99

Sample Number ·	MECBK4									
Sampling Location	FB1									
Matrix	Water									
Units ·	ug/L									
Date Sampled :	08/24/1999									
Time Sampled	14·15									
%Solids :	0 0									
Dilution Factor	1 0									
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	43.2	J								
ANTIMONY	2.2	UJ								
ARSENIC	2 1	U								
BARIUM	1 0	U								
BERYLLIUM	0.10	U								
CADMIUM	0 40	U								
CALCIUM	367	J								
CHROMIUM	0.30	U								
COBALT	0 60	U								
COPPER	2 0	J								
IRON	22 2	J								
LEAD	1.0	U								
MAGNESIUM	40 6	U								
MANGANESE	2 9	J								
MERCURY	0 15	J								
NICKEL	0.70	U								
POTASSIUM	28 2	J								
SELENIUM	1 8	U								
SILVER	0 40	U								
SODIUM	259	J								
THALLIUM	3 3	J								
VANADIUM	0 80	U								
ZINC	16 3	J								
CYANIDE	4 5	J								

QC EXCEPTION SUMMARY REPORT

CASE\SAS#: 27323 SITE: PLYMOUTH/HAGGERTY MATRIX: WATER WATER SAMPLE SPK: MECBK1

DATA SET: MECBJ9 LAB: SENTINEL CONC: LOW WATER SAMPLE DUP: MECBK1

LAB QC # _____ REVIEWED BY: S. CONNET SOIL SAMPLE SPK: _____

DATE: 10-8-99 SOIL SAMPLE DUP: _____

FORM #		FORM 1	FORM 2	FORM 3	FORM 3	FORM 3	FORM 4	FORM 5	FORM 6	FORM 7	FORM 7	FORM 9	FORM 9	FORM 6	FORM 5	FIELD	FIELD	FIELD	FIELD	COMMENTS
ELEMENT	HOLD TIME	INITIAL CALIB	CONTIN CALIB	CALIB BLANK	PREP WATER BLANK	PREP SOIL BLANK	ICS %R	SOIL SPIKE %R	SOIL DUP RPD	ICS AQ	ICS SOIL	SERIAL DILUTION AQUEOUS	SERIAL DILUTION SOIL	AQ DUP %R	AQ SPIKE %R	BLANK K4	DUP RPD K2/K3	BLANK	DUP RPD	
ALUMINUM																	98.1*			
ANTIMONY															65.0					
ARSENIC																				
BARIUM																				
BERYLLIUM				0.188																
CADMIUM				0.478																
CALCIUM																	30.6*			
CHROMIUM				2.0																
COBALT																				
COPPER																	104*			
IRON																	45.6			
LEAD				2.01/-1.8 K4																
MAGNESIUM																				
MANGANESE																	61.4			
MERCURY				0.2	0.15											0.15				
NICKEL																				
POTASSIUM				20.0								19.2				28.2	92.1*			
SELENIUM																				
SILVER																				
SODIUM																	43.5			
THALLIUM				3.1												3.3				
TIN																				
VANADIUM																				
ZINC																	149*			
CYANIDE					-2.29											4.5				

* K1 NEGATIVE (LIDL) NOT AFFECTED

* ABSOLUTE DIFFERENCE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: MECBJ9 CERCLIS No: ZZ

Case No: 21323 Site Name Location: Plymouth | Haggerty

Contractor or EPA Lab: Sentinel Data User: MDEQ

No. of Samples: 6 Date Sampled or Data Received: Sep 23 1999

Have Chain-of-Custody records been received? Yes ✓ No ____
Have traffic reports or packing lists been received? Yes ✓ No ____
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ____ No ____
If no, which traffic report or packing list numbers are missing?

_____ _____ _____ _____

_____ _____ _____ _____

Are basic data forms in? Yes ✓ No ____
No of samples claimed: 6 No. of samples received: 6

Received by: Stephanie Tobin Date: 09-23-99

Received by LSSS: Stephanie Tobin Date: 09-23-99

Review started: 10-8-99 Reviewer Signature: [signature]

Total time spent on review: 4.5 Date review completed: 10-12-99

Copied by: Lynette Burnett Date: 10-20-99

Mailed to user by: Lynette Burnett Date: 10-20-99

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

_____

_____

Received by Data Mgmt. Coordinator for Files. Data: _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: October 11, 1999

SUBJECT: Review of Data
Received for Review on September 23, 1999

FROM: Stephen L. Ostrodka, Chief (SRT-4J) /LF
Superfund Technical Support Section

TO: Data User: MDEQ

We have reviewed the data by CADRE for the following case:

SITE NAME: Plymouth/ Haggerty

CASE NUMBER: 27323 SDG NUMBER: MEAHK6

Number and Type of Samples: 20 soil

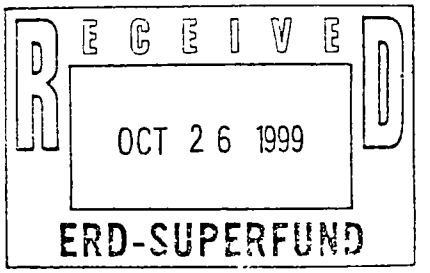
Sample Numbers: MEAHK6-8;MEANM3-5;MEANW7-9;MEANZ4;METF31,32,34-41

Laboratory: Sentinel Hrs. for Review: 12.5 +0.5

Following are our findings:
Se NON-detected results are unsable (R) due to extremely low MATRIX SPIKE recovery.
All other data are usable with the qualifications described in the attached narrative.

L. Finkelberg
10-18-99

CC: Cecilia Luckett
Region 5 TPO
Mail Code: SM-5J



Case Number : 27323
Site Name: Plymouth/ Haggerty

SDG Number: MEAHK6
Laboratory: Sentinel

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty soil samples numbered MEAHK6-8, MEANM3-5, MEANW7-9, MEANZ4, METF31, METF32, and METF34-41 were collected on August 24, 1999. The lab received the samples on August 25, 1999 in good condition. All samples were analyzed for metals and cyanide. All samples were analyzed using CLP SOW ILM04.0 analysis procedures.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using the MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectrometric procedure.

Reviewed By: J. Ganz
Date: October 11, 1999

Case Number : 27323 SDG Number: MEAHK6
Site Name: Plymouth/ Haggerty Laboratory: Sentinel

HOLDING TIME:

HOLDING TIME CRITERIA

Inorganic

	-- Holding Time --		------- pH -------	
	Primary	Expanded	Primary	Expanded
Metals	180	0	2.0	0.0
Mercury	28	0	2.0	0.0
Cyanide	14	0	12.0	0.0

DC-280: The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

MEAHK6, MEAHK7, MEAHK8, MEANM3, MEANM4, MEANM5
MEANW7, MEANW8, MEANW9, MEANZ4, METF31, METF32
METF34, METF35, METF36, METF37, METF38, METF39
METF40, METF41

No problems were found for this qualification.

2. CALIBRATIONS:

CALIBRATION CRITERIA

Inorganic

Percent Recovery Limits

	--- Primary ---		-- Expanded ---	
	Low	High	Low	High
Cyanide	85.00	115.00	70.00	130.00
ICP	90.00	110.00	75.00	125.00
Mercury	80.00	120.00	65.00	135.00

No problems were found for this qualification.

3. BLANKS:

LABORATORY BLANKS CRITERIA

Reviewed By: J. Ganz
Date: October 11, 1999

Case Number : 27323
Site Name: Plymouth/ Haggerty

SDG Number: MEAHK6
Laboratory: Sentinel

DC-283: The following inorganic samples are associated with a blank analy with negative concentration whose absolute value is greater than the instrument detection limit (IDL). The sample concentration is greater than the IDL but less than five times the absolute value of the blank concentration. Hits are qualified "J". Some non-detect concentration values are sufficiently high such that the detection limit may be elevated. These non-detects are qualified "UJ".

MEAHK7
Cyanide

MEAHK8
Cyanide

MEANM4
Cyanide

MEANM5
Cyanide

MEANW7
Cyanide

MEANW9
Cyanide

MEANZ4
Cyanide

METF32
Cyanide

METF34
Cyanide

METF35
Cyanide

METF36
Cyanide

METF37
Cyanide

METF38
Cyanide

METF40
Cyanide

DC-284: The following inorganic samples are associated with a blank concentration which is greater than the instrument detection

Reviewed By: J. Ganz
Date: October 11, 1999

limit (IDL). The sample concentration is also greater than the IDL and less than five times the blank concentration. Hits are qualified "J" and non-detects are not flagged.

Cyanide
METF39, METF41

DC-338: During review of the following inorganic samples, the reported IDL/default CRDL value was used for cyanide.

MEAHK6, MEAHK7, MEAHK8, MEANM3, MEANM4, MEANM5
MEANW7, MEANW8, MEANW9, MEANZ4, METF31, METF32
METF34, METF35, METF36, METF37, METF38, METF39
METF40, METF41

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

MATRIX SPIKE CRITERIA

Inorganic

Percent Recovery Limits	
Upper	125.0
Lower	75.0
Extreme lower	30.0

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low (30-74 %) indicating that sample results may be biased low.
Hits are qualified "J" and non-detects are qualified "UJ".

Selenium
MEAHK6, MEAHK7, MEAHK8, MEANM3, MEANM4, MEANM5
MEANW7, MEANW8, MEANW9, MEANZ4, METF31, METF32
METF34, METF35, METF36, METF37, METF38, METF39
METF40, METF41

DC-269: The following inorganic samples are associated with a matrix spike recovery which is extremely low (<30 %) indicating that sample results may be biased low.
Hits are qualified "J" and non-detects are qualified "R".

Antimony
MEAHK6, MEAHK7, MEAHK8, MEANM3, MEANM4, MEANM5
MEANW7, MEANW8, MEANW9, MEANZ4, METF31, METF32
METF34, METF35, METF36, METF37, METF38, METF39
METF40, METF41

Reviewed By: J. Ganz
Date: October 11, 1999

Case Number : 27323 SDG Number: MEAHK6
Site Name: Plymouth/ Haggerty Laboratory: Sentinel

No problems were found for the laboratory control sample.

5. LABORATORY AND FIELD DUPLICATE

No problems were found for this qualification.

6. ICP ANALYSIS

No problems were found for this qualification.

7. GFAA ANALYSIS

No GFAA analyses were performed for this case.

8. SAMPLE RESULTS

All data, except those qualified above, are acceptable.

Reviewed By: J. Ganz
Date: October 11, 1999

CADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. (The compound may or may not be present)

Analytical Results (Qualified Data)

Case # 27323 SDG MEAHK6

Site PLYMOUTH/ HAGGERTY Number of Soil Samples 20

Lab · SENTIN Number of Water Samples 0

Reviewer · J GANZ

Date . OCTOBER 11, 1999

Sample Number	MEAHK6		MEAHK7		MEAHK8		MEANM3		MEANM4	
Sampling Location	SS11		SS12		SS13		SS14		SS15	
Matnx	Soil		Soil		Soil		Soil		Soil	
Units ·	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	15 05		12 20		13 45		13 25		13 10	
%Solids	78 6		79 3		87 1		79 9		88 4	
Dilution Factor :	1 0		1 0		1 0		1 0		1 0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	7760		8460		6110		6470		8590	
ANTIMONY	0 74	R	0.76	R	0.69	R	3 3	J	0 68	R
ARSENIC	7 7		11 1		10 8		17 3		14 7	
BARIUM	56 5		74 0		91 2		476		65 8	
BERYLLIUM	0 42		0 51		0 37		0 93		0 55	
CADMIUM	0 33		0 13	U	0.46		6.5		0 11	U
CALCIUM	61300		31400		30900		40400		19200	
CHROMIUM	14.6		16.8		17.9		32.0		17.2	
COBALT	7 7		9 6		6 9		7 6		8 8	
COPPER	21 6		27.8		52.5		213		21 4	
IRON	16100		21200		19200		26500		19600	
LEAD	32 2		40 0		133		736		55 0	
MAGNESIUM	17000		10500		7530		3980		6800	
MANGANESE	476		812		713		654		534	
MERCURY	0 070		0 11		0 090		0 38		0 090	
NICKEL	21.0		28 6		21 4		33.1		24.2	
POTASSIUM	2010		2130		1370		776		1930	
SELENIUM	2 6	J	2 6	J	2 5	J	4.2	J	2 3	J
SILVER	0 35		0 54		0 71		2 0		0 63	
SODIUM	563		290		252		505		247	
THALLIUM	2 8		4 0		3 7		5 3		3 6	
VANADIUM	20 5		21.3		16 7		21 8		22 0	
ZINC	84 2		88 8		172		944		101	
CYANIDE	0 060	U	0 46	J	0 44	J	0 060	U	0 19	J

Analytical Results (Qualified Data)

Case # 27323 SDG MEAHK6

Site PLYMOUTH/ HAGGERTY

Lab SENTIN

Reviewer J GANZ

Date OCTOBER 11, 1999

Sample Number	MEANM5		MEANW7		MEANW8		MEANW9		MEANZ4	
Sampling Location	SS16		SS17		SS18		SS19		SS20	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	14 10		15 25		15 35		14 00		15 50	
%Solids	91 2		91 5		90 6		84 5		91 7	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	4280		3920		5410		6910		3870	
ANTIMONY	0 64	R	0 66	R	1.7	J	0 71	R	0.65	R
ARSENIC	7 0		15 4		13 9		17 1		4 9	
BARIUM	84.1		46 1		245		54 8		44 6	
BERYLLIUM	0 26		0 30		0 70		0 41		0 26	
CADMIUM	0.92		0 69		6 0		0 31		0 23	
CALCIUM	3670		3590		18400		5120		3480	
CHROMIUM	10.1		15 6		21 5		14.4		8 3	
COBALT	3 3		4 6		6 3		8 1		3 5	
COPPER	27 1		23 9		126		19 0		11.9	
IRON	12800		19100		24600		19400		8330	
LEAD	97 5		72 5		312		50 3		34.7	
MAGNESIUM	1320		1490		4930		2580		1350	
MANGANESE	471		308		414		560		325	
MERCURY	0 11		0 080		0 18		0 090		0 050	U
NICKEL	9 2		11 2		26 8		59.4		8.3	
POTASSIUM	705		377		578		1440		656	
SELENIUM	2 2	J	2 5	J	3 6	J	2 9	J	1 5	J
SILVER	0 63		0 81		1 3		0 76		0 37	
SODIUM	215		251		399		276		194	
THALLIUM	2 4		4 0		5 1		3 9		1 3	
VANADIUM	10 8		13 5		15 5		18.6		10 9	
ZINC	161		146		633		108		64 3	
CYANIDE	0 19	J	0.34	J	0 64		0 36	J	0.29	J

Analytical Results (Qualified Data)

Case # 27323 SDG MEAHK6

Site . PLYMOUTH/ HAGGERTY

Lab SENTIN

Reviewer J GANZ

Date OCTOBER 11, 1999

Sample Number	METF31		METF32		METF34		METF35		METF36	
Sampling Location	SS1		SS2		SS3		SS4		SS8	
Matrix .	Soil		Soil		Soil		Soil		Soil	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	11 00		11 05		11 10		11 15		15 45	
%Solids .	88 4		73 5		63 5		81 5		79 0	
Dilution Factor	1 0		1 0		1 0		1 0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	6410		5540		4060		8570		8900	
ANTIMONY	0.84	J	0.79	R	0 94	R	0.72	R	0.76	R
ARSENIC	15 0		5 9		3 3		13 8		26 8	
BARIUM	234		43 8		81.7		56.8		69.4	
BERYLLIUM	0 59		0 33		0 30		0 52		0 50	
CADMIUM	3 5		1 0		4 0		0 12	U	0 13	U
CALCIUM	34600		45600		112000		21800		15500	
CHROMIUM	27 5		13 5		11 6		16 5		15 2	
COBALT	7 3		5 3		3 3		8 2		9 3	
COPPER	93 2		21 1		43.1		22.8		16.4	
IRON	25900		11700		9200		18400		32800	
LEAD	283		39 4		75 5		37 8		14 4	
MAGNESIUM	8840		12600		7850		8770		5860	
MANGANESE	415		279		153		533		273	
MERCURY	0 19		0 070		0 13		0 080		0 060	U
NICKEL	42 4		22 2		29 3		22 2		21 4	
POTASSIUM	1080		1210		1040		1900		1800	
SELENIUM	4 4	J	2.3	J	5 0	J	3 0	J	4 4	J
SILVER	1 5		0 51		0 44	U	0 62		0 99	
SODIUM	294		852		750		273		430	
THALLIUM	5 1		1 8		1.5		3 3		6 9	
VANADIUM	17 5		15 1		9 3		22 4		23 5	
ZINC	1530		524		1590		82 5		59 0	
CYANIDE	0.050	U	0 070	J	0 63	J	0 13	J	0 36	J

Analytical Results (Qualified Data)

Case # 27323 SDG · MEAHK6

Site · PLYMOUTH/ HAGGERTY

Lab SENTIN

Reviewer · J GANZ

Date OCTOBER 11, 1999

Sample Number ·	METF37		METF38		METF39		METF40		METF41	
Sampling Location	SS9		SS10		SS5		SS6		SS7	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled ·	15 55		14 55		12 10		12 25		12 35	
%Solids	68 1		89 4		85 4		78 6		81 1	
Dilution Factor	1 0		1 0		1.0		1 0		1 0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	8170		4820		4980		4340		5510	
ANTIMONY	0 88	R	0 67	R	0.68	R	0 76	R	0.74	R
ARSENIC	8 5		7 7		6 5		5 7		7 3	
BARIUM	69 5		56 6		55 4		37 2		78 7	
BERYLLIUM	0 43		0 23		0 28		0 22		0 34	
CADMIUM	0 53		0 11	U	0.18		0 56		0 60	
CALCIUM	62100		54800		35400		59400		73700	
CHROMIUM	15.4		14 5		10.3		9 2		11.9	
COBALT	8 8		7.0		5 3		4 9		5 4	
COPPER	22 5		25 3		17 6		16 7		25.1	
IRON	18800		49200		11800		11200		11800	
LEAD	19 7		27.8		29 0		18 1		60 0	
MAGNESIUM	12300		10100		12900		8430		5490	
MANGANESE	618		549		426		162		284	
MERCURY	0 070	U	0 060	U	0 070		0 060	U	0 090	
NICKEL	24 6		20 5		13 9		14 5		15 4	
POTASSIUM	1930		1080		1080		1090		1310	
SELENIUM	3 1	J	6.2	J	1 4	J	2 3	J	1 9	J
SILVER	0 41	U	0 86		0 40		0 35	U	0 35	U
SODIUM	433		255		253		514		819	
THALLIUM	3 8		10 7		1 6		2 0		2 1	
VANADIUM	21 5		13 4		13 7		12 6		13 9	
ZINC	153		94 4		73 0		86 0		107	
CYANIDE	0 070	UJ	0.25	J	0 41	J	0 31	J	0.37	J

QC EXCEPTION SUMMARY REPORT

CASE\SAS#: 27323 SITE: Plymouth/Haggerty MATRIX: Soil WATER SAMPLE SPK: _____

DATA SET: MEAHK6 LAB: Sentinel CONC: low WATER SAMPLE DUP: _____

LAB QC # _____ REVIEWED BY: J. Ganz SOIL SAMPLE SPK: _____

DATE: October 8, 1999 SOIL SAMPLE DUP: _____

FORM #		FORM 2	FORM 2	FORM 3	FORM 3	FORM 3	FORM 4	FORM 5	FORM 6	FORM 7	FORM 7	FORM 9	FORM 9	FORM 6	FORM 5	FIELD	FIELD	FIELD	FIELD		
ELEMENT	HOLD TIME	INITIAL CALIB	CONTI N CALIB	CALIB BLANK	PREP WATER BLANK	PREP SOIL BLANK	ICB %R	SOIL SPIKE %R	SOIL DUP RPD	LCB AQ	LCS SOIL	SERIAL DILUTION AQUEOUS	SERIAL DILUTION SOIL	AQ DUP RPD	AQ SPIKE %R	BLANK	DUP RPD	BLANK	DUP RPD	GFAA DUP	GFAA ANALYT SPIKE
ALUMINUM																					
ANTIMONY								27.6													
ARSENIC																					
BARIUM																					
BERYLLIUM																					
CADMIUM																					
CALCIUM																					
CHROMIUM																					
COBALT																					
COPPER																					
IRON																					
LEAD																					
MAGNESIUM																					
MANGANESE																					
MERCURY																					
NICKEL																					
POTASSIUM																					
SELENIUM								72.4													
SILVER																					
SODIUM																					
THALLIUM																					
TIN																					
VANADIUM																					
ZINC																					
CYANIDE				-2		0.495															

CN(+): ~~1-8, M4, 5, 7, 9, Z4, F32, 34-36, 38-41~~ F39, 41

(-): ~~1~~ 8; M4, 5, 7, 9; Z4; F32, 34-36, 38, ~~40~~

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: MEAHK6 CERCLIS No: ZZ

Case No: 27323 Site Name Location: Plymouth / Haggerty

Contractor or EPA Lab: Sentinel Data User: MDEQ

No. of Samples: 20 Soil Date Sampled or Data Received: Sep 23, 1999

Have Chain-of-Custody records been received? Yes ✓ No ____
Have traffic reports or packing lists been received? Yes ✓ No ____
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ____ No ____
If no, which traffic report or packing list numbers are missing?

_____ _____ _____ _____

_____ _____ _____ _____

Are basic data forms in? Yes ✓ No ____
No of samples claimed: 20 No. of samples received: 20

Received by: Stephanie Tobin Date: 09-23-99

Received by LSSS: Stephanie Tobin Date: 09-23-99

Review started: 10-8-99 Reviewer Signature: J. Kamy

Total time spent on review: 12.5 Date review completed: 10-11-99

Copied by: Lynette Burnett 10-20-99 Date: 10-20-99

Mailed to user by: Lynette Burnett Date: 10-20-99

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

_____

_____

Received by Data Mgmt. Coordinator for Files. Data: _____

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY (517) 335-9800

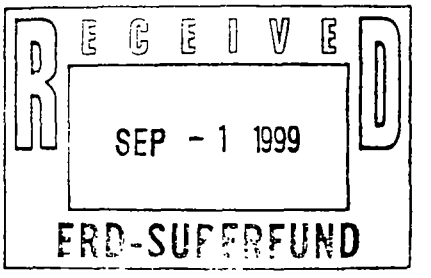
P.O. Box 30270
Lansing, MI 48909

Report To: Environmental Response Div.
300 S. Washington Square
Knapps Center
Lansing, MI 48933
Attn: SUNNY KRAJCOVIC
Total: $5,100.00

Lab Work Order # 9908164
Work Site ID: PLYMOUTH/HAGGERTY RD.
Matrix: Sediment\Soil
Received: 8/25/1999
Client: ER

Reported: 8/30/1999
Number of Samples: 34

This is an original report: Laura C Utter Date: 8/30/99



MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-01ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SS1
Total Solids: 89%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		290	52.5
74-87-3	Chloromethane	ND		290	52.5
75-01-4	Vinyl chloride	ND		120	52.5
74-83-9	Bromomethane	ND		290	52.5
75-00-3	Chloroethane	ND		290	52.5
75-69-4	Trichlorofluoromethane	ND		290	52.5
67-64-1	2-Propanone (Acetone)	ND		880	52 5
60-29-7	Diethyl ether	ND		290	52.5
75-35-4	1,1-Dichloroethene	ND		59	52.5
74-88-4	Methyl iodide	ND		120	52.5
107-13-1	Acrylonitrile	ND		290	52.5
75-09-2	Methylene chloride	ND		290	52.5
75-15-0	Carbon disulfide	ND		290	52.5
156-60-5	trans-1,2-Dichloroethene	ND		59	52.5
1634-04-4	Methyltertbutylether (MTBE)	ND		290	52.5
75-34-3	1,1-Dichloroethane	ND		59	52.5
78-93-3	2-Butanone (MEK)	ND		290	52.5
156-59-2	cis-1,2-Dichloroethene	ND		59	52.5
67-66-3	Chloroform	ND		59	52.5
74-97-5	Bromochloromethane	ND		120	52.5
71-55-6	1,1,1-Trichloroethane	ND		59	52.5
107-06-2	1,2-Dichloroethane	ND		59	52.5
71-43-2	Benzene	ND		59	52.5
56-23-5	Carbon tetrachloride	ND		59	52.5
78-87-5	1,2-Dichloropropane	ND		59	52.5
79-01-6	Trichloroethene	ND		59	52.5
74-95-3	Dibromomethane	ND		120	52.5
75-27-4	Bromodichloromethane	ND		120	52.5
591-78-6	2-Hexanone	ND		290	52.5
10061-01-5	cis-1,3-Dichloropropene	ND		59	52.5
10061-02-6	trans-1,3-Dichloropropene	ND		59	52.5
108-88-3	Toluene	ND		59	52.5
79-00-5	1,1,2-Trichloroethane	ND		59	52.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		290	52.5
124-48-1	Dibromochloromethane	ND		120	52.5

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
106-93-4	1,2-Dibromoethane	ND		59	52.5
127-18-4	Tetrachloroethene	ND		59	52.5
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	52.5
108-90-7	Chlorobenzene	ND		59	52.5
100-41-4	Ethylbenzene	ND		59	52.5
108383,106423	m & p Xylene	ND		120	52.5
75-25-2	Bromoform	ND		120	52.5
100-42-5	Styrene	ND		59	52.5
95-47-6	o-Xylene	ND		59	52.5
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	52.5
96-18-4	1,2,3-Trichloropropane	ND		120	52.5
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	52.5
98-82-8	Isopropylbenzene	ND		120	52.5
103-65-1	n-Propylbenzene	ND		120	52.5
108-67-8	1,3,5-Trimethylbenzene	ND		120	52.5
95-63-6	1,2,4-Trimethylbenzene	ND		120	52.5
541-73-1	1,3-Dichlorobenzene	ND		120	52.5
106-46-7	1,4-Dichlorobenzene	ND		120	52.5
95-50-1	1,2-Dichlorobenzene	ND		120	52.5
67-72-1	Hexachloroethane	ND		120	52.5
96-12-8	1,2-Dibromo-3-chloropropane	ND		290	52.5
120-82-1	1,2,4-Trichlorobenzene	ND		290	52.5
91-20-3	Naphthalene	ND		290	52.5
91-57-6	2-Methylnaphthalene	ND		290	52.5

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-02ME

Date Collected:	8/24/1999	Test Code:	SME
		Test Name:	Soil-MEOH
Date Analyzed:	8/26/1999 by WORM	Sample ID:	SS2
Total Solids:	71%		

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		370	52.9
74-87-3	Chloromethane	ND		370	52.9
75-01-4	Vinyl chloride	ND		150	52.9
74-83-9	Bromomethane	ND		370	52.9
75-00-3	Chloroethane	ND		370	52.9
75-69-4	Trichlorofluoromethane	ND		370	52.9
67-64-1	2-Propanone (Acetone)	ND		1100	52.9
60-29-7	Diethyl ether	ND		370	52.9
75-35-4	1,1-Dichloroethene	ND		75	52.9
74-88-4	Methyl iodide	ND		150	52.9
107-13-1	Acrylonitrile	ND		370	52.9
75-09-2	Methylene chloride	ND		370	52.9
75-15-0	Carbon disulfide	ND		370	52.9
156-60-5	trans-1,2-Dichloroethene	ND		75	52.9
1634-04-4	Methyltertbutylether (MTBE)	ND		370	52.9
75-34-3	1,1-Dichloroethane	ND		75	52.9
78-93-3	2-Butanone (MEK)	ND		370	52.9
156-59-2	cis-1,2-Dichloroethene	ND		75	52.9
67-66-3	Chloroform	ND		75	52.9
74-97-5	Bromochloromethane	ND		150	52.9
71-55-6	1,1,1-Trichloroethane	ND		75	52.9
107-06-2	1,2-Dichloroethane	ND		75	52.9
71-43-2	Benzene	ND		75	52.9
56-23-5	Carbon tetrachloride	ND		75	52.9
78-87-5	1,2-Dichloropropane	ND		75	52.9
79-01-6	Trichloroethene	ND		75	52.9
74-95-3	Dibromomethane	ND		150	52.9
75-27-4	Bromodichloromethane	ND		150	52.9
591-78-6	2-Hexanone	ND		370	52.9
10061-01-5	cis-1,3-Dichloropropene	ND		75	52.9
10061-02-6	trans-1,3-Dichloropropene	ND		75	52.9
108-88-3	Toluene	ND		75	52.9
79-00-5	1,1,2-Trichloroethane	ND		75	52.9
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		370	52.9
124-48-1	Dibromochloromethane	ND		150	52.9
106-93-4	1,2-Dibromoethane	ND		75	52.9

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		75	52.9
630-20-6	1,1,1,2-Tetrachloroethane	ND		150	52.9
108-90-7	Chlorobenzene	ND		75	52.9
100-41-4	Ethylbenzene	ND		75	52.9
108383,106423	m & p Xylene	ND		150	52.9
75-25-2	Bromoform	ND		150	52.9
100-42-5	Styrene	ND		75	52.9
95-47-6	o-Xylene	ND		75	52.9
79-34-5	1,1,2,2-Tetrachloroethane	ND		150	52.9
96-18-4	1,2,3-Trichloropropane	ND		150	52.9
110-57-6	trans-1,4-Dichloro-2 butene	ND		150	52.9
98-82-8	Isopropylbenzene	ND		150	52.9
103-65-1	n-Propylbenzene	ND		150	52.9
108-67-8	1,3,5-Trimethylbenzene	ND		150	52.9
95-63-6	1,2,4-Trimethylbenzene	ND		150	52.9
541-73-1	1,3-Dichlorobenzene	ND		150	52.9
106-46-7	1,4-Dichlorobenzene	ND		150	52.9
95-50-1	1,2-Dichlorobenzene	ND		150	52.9
67-72-1	Hexachloroethane	ND		150	52.9
96-12-8	1,2-Dibromo-3-chloropropane	ND		370	52.9
120-82-1	1,2,4-Trichlorobenzene	ND		370	52.9
91-20-3	Naphthalene	ND		370	52.9
91-57-6	2-Methylnaphthalene	ND		370	52.9

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order # 9908164-03ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SS3
Total Solids: 60%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		450	54.1
74-87-3	Chloromethane	ND		450	54.1
75-01-4	Vinyl chloride	ND		180	54.1
74-83-9	Bromomethane	ND		450	54.1
75-00-3	Chloroethane	ND		450	54.1
75-69-4	Trichlorofluoromethane	ND		450	54.1
67-64-1	2-Propanone (Acetone)	ND		1400	54.1
60-29-7	Diethyl ether	ND		450	54.1
75-35-4	1,1-Dichloroethene	ND		90	54.1
74-88-4	Methyl iodide	ND		180	54.1
107-13-1	Acrylonitrile	ND		450	54.1
75-09-2	Methylene chloride	ND		450	54.1
75-15-0	Carbon disulfide	ND		450	54.1
156-60-5	trans-1,2-Dichloroethene	ND		90	54.1
1634-04-4	Methyltertbutylether (MTBE)	ND		450	54.1
75-34-3	1,1-Dichloroethane	ND		90	54.1
78-93-3	2-Butanone (MEK)	ND		450	54.1
156-59-2	cis-1,2-Dichloroethene	ND		90	54.1
67-66-3	Chloroform	ND		90	54.1
74-97-5	Bromochloromethane	ND		180	54.1
71-55-6	1,1,1-Trichloroethane	ND		90	54.1
107-06-2	1,2-Dichloroethane	ND		90	54.1
71-43-2	Benzene	ND		90	54.1
56-23-5	Carbon tetrachloride	ND		90	54.1
78-87-5	1,2-Dichloropropane	ND		90	54.1
79-01-6	Trichloroethene	ND		90	54.1
74-95-3	Dibromomethane	ND		180	54.1
75-27-4	Bromodichloromethane	ND		180	54.1
591-78-6	2-Hexanone	ND		450	54.1
10061-01-5	cis-1,3-Dichloropropene	ND		90	54.1
10061-02-6	trans-1,3-Dichloropropene	ND		90	54.1
108-88-3	Toluene	ND		90	54.1
79-00-5	1,1,2-Trichloroethane	ND		90	54.1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		450	54.1
124-48-1	Dibromochloromethane	ND		180	54.1
106-93-4	1,2-Dibromoethane	ND		90	54.1

MDEQ ENVIRONMENTAL LABORATORY
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CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		90	54.1
630-20-6	1,1,1,2-Tetrachloroethane	ND		180	54.1
108-90-7	Chlorobenzene	ND		90	54.1
100-41-4	Ethylbenzene	ND		90	54.1
108383,106423	m & p Xylene	ND		180	54.1
75-25-2	Bromoform	ND		180	54.1
100-42-5	Styrene	ND		90	54.1
95-47-6	o-Xylene	ND		90	54.1
79-34-5	1,1,2,2-Tetrachloroethane	ND		180	54.1
96-18-4	1,2,3-Trichloropropane	ND		180	54.1
110-57-6	trans-1,4-Dichloro-2 butene	ND		180	54.1
98-82-8	Isopropylbenzene	ND		180	54.1
103-65-1	n-Propylbenzene	ND		180	54.1
108-67-8	1,3,5-Trimethylbenzene	ND		180	54.1
95-63-6	1,2,4-Trimethylbenzene	ND		180	54.1
541-73-1	1,3-Dichlorobenzene	ND		180	54.1
106-46-7	1,4-Dichlorobenzene	ND		180	54.1
95-50-1	1,2-Dichlorobenzene	ND		180	54.1
67-72-1	Hexachloroethane	ND		180	54.1
96-12-8	1,2-Dibromo-3-chloropropane	ND		450	54.1
120-82-1	1,2,4-Trichlorobenzene	ND		450	54.1
91-20-3	Naphthalene	ND		450	54.1
91-57-6	2-Methylnaphthalene	ND		450	54.1

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-04ME

Date Collected:	8/24/1999	Test Code:	SME
		Test Name:	Soil-MEOH
Date Analyzed:	8/26/1999 by WORM	Sample ID:	SS4
Total Solids:	81%		

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		330	54.2
74-87-3	Chloromethane	ND		330	54.2
75-01-4	Vinyl chloride	ND		130	54.2
74-83-9	Bromomethane	ND		330	54.2
75-00-3	Chloroethane	ND		330	54.2
75-69-4	Trichlorofluoromethane	ND		330	54.2
67-64-1	2-Propanone (Acetone)	ND		1000	54.2
60-29-7	Diethyl ether	ND		330	54.2
75-35-4	1,1-Dichloroethene	ND		67	54.2
74-88-4	Methyl iodide	ND		130	54.2
107-13-1	Acrylonitrile	ND		330	54.2
75-09-2	Methylene chloride	ND		330	54.2
75-15-0	Carbon disulfide	ND		330	54.2
156-60-5	trans-1,2-Dichloroethene	ND		67	54.2
1634-04-4	Methyltertbutylether (MTBE)	ND		330	54.2
75-34-3	1,1-Dichloroethane	ND		67	54.2
78-93-3	2-Butanone (MEK)	ND		330	54.2
156-59-2	cis-1,2-Dichloroethene	ND		67	54.2
67-66-3	Chloroform	ND		67	54.2
74-97-5	Bromochloromethane	ND		130	54.2
71-55-6	1,1,1-Trichloroethane	ND		67	54.2
107-06-2	1,2-Dichloroethane	ND		67	54.2
71-43-2	Benzene	ND		67	54.2
56-23-5	Carbon tetrachloride	ND		67	54.2
78-87-5	1,2-Dichloropropane	ND		67	54.2
79-01-6	Trichloroethene	ND		67	54.2
74-95-3	Dibromomethane	ND		130	54.2
75-27-4	Bromodichloromethane	ND		130	54.2
591-78-6	2-Hexanone	ND		330	54.2
10061-01-5	cis-1,3-Dichloropropene	ND		67	54.2
10061-02-6	trans-1,3-Dichloropropene	ND		67	54.2
108-88-3	Toluene	ND		67	54.2
79-00-5	1,1,2-Trichloroethane	ND		67	54.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		330	54.2
124-48-1	Dibromochloromethane	ND		130	54.2
106-93-4	1,2-Dibromoethane	ND		67	54.2

MDEQ ENVIRONMENTAL LABORATORY
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CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		67	54.2
630-20-6	1,1,1,2-Tetrachloroethane	ND		130	54.2
108-90-7	Chlorobenzene	ND		67	54.2
100-41-4	Ethylbenzene	ND		67	54.2
108383,106423	m & p Xylene	ND		130	54.2
75-25-2	Bromoform	ND		130	54.2
100-42-5	Styrene	ND		67	54.2
95-47-6	o-Xylene	ND		67	54.2
79-34-5	1,1,2,2-Tetrachloroethane	ND		130	54.2
96-18-4	1,2,3-Trichloropropane	ND		130	54.2
110-57-6	trans-1,4-Dichloro-2 butene	ND		130	54.2
98-82-8	Isopropylbenzene	ND		130	54.2
103-65-1	n-Propylbenzene	ND		130	54.2
108-67-8	1,3,5-Trimethylbenzene	ND		130	54.2
95-63-6	1,2,4-Trimethylbenzene	ND		130	54.2
541-73-1	1,3-Dichlorobenzene	ND		130	54.2
106-46-7	1,4-Dichlorobenzene	ND		130	54.2
95-50-1	1,2-Dichlorobenzene	ND		130	54.2
67-72-1	Hexachloroethane	ND		130	54.2
96-12-8	1,2-Dibromo-3-chloropropane	ND		330	54.2
120-82-1	1,2,4-Trichlorobenzene	ND		330	54.2
91-20-3	Naphthalene	ND		330	54.2
91-57-6	2-Methylnaphthalene	ND		330	54.2

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-05ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed. 8/26/1999 by WORM
Sample ID: SS5
Total Solids: 85%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		320	53.8
74-87-3	Chloromethane	ND		320	53.8
75-01-4	Vinyl chloride	ND		130	53.8
74-83-9	Bromomethane	ND		320	53.8
75-00-3	Chloroethane	ND		320	53.8
75-69-4	Trichlorofluoromethane	ND		320	53.8
67-64-1	2-Propanone (Acetone)	ND		950	53.8
60-29-7	Diethyl ether	ND		320	53.8
75-35-4	1,1-Dichloroethene	ND		63	53.8
74-88-4	Methyl iodide	ND		130	53.8
107-13-1	Acrylonitrile	ND		320	53.8
75-09-2	Methylene chloride	ND		320	53.8
75-15-0	Carbon disulfide	ND		320	53.8
156-60-5	trans-1,2-Dichloroethene	ND		63	53.8
1634-04-4	Methyltertbutylether (MTBE)	ND		320	53.8
75-34-3	1,1-Dichloroethane	ND		63	53.8
78-93-3	2-Butanone (MEK)	ND		320	53.8
156-59-2	cis-1,2-Dichloroethene	ND		63	53.8
67-66-3	Chloroform	ND		63	53.8
74-97-5	Bromochloromethane	ND		130	53.8
71-55-6	1,1,1-Trichloroethane	ND		63	53.8
107-06-2	1,2-Dichloroethane	ND		63	53.8
71-43-2	Benzene	ND		63	53.8
56-23-5	Carbon tetrachloride	ND		63	53.8
78-87-5	1,2-Dichloropropane	ND		63	53.8
79-01-6	Trichloroethene	ND		63	53.8
74-95-3	Dibromomethane	ND		130	53.8
75-27-4	Bromodichloromethane	ND		130	53.8
591-78-6	2-Hexanone	ND		320	53.8
10061-01-5	cis-1,3-Dichloropropene	ND		63	53.8
10061-02-6	trans-1,3-Dichloropropene	ND		63	53.8
108-88-3	Toluene	ND		63	53.8
79-00-5	1,1,2-Trichloroethane	ND		63	53.8
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		320	53.8
124-48-1	Dibromochloromethane	ND		130	53.8
106-93-4	1,2-Dibromoethane	ND		63	53.8

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		63	53.8
630-20-6	1,1,1,2-Tetrachloroethane	ND		130	53.8
108-90-7	Chlorobenzene	ND		63	53.8
100-41-4	Ethylbenzene	ND		63	53.8
108383,106423	m & p Xylene	ND		130	53.8
75-25-2	Bromoform	ND		130	53.8
100-42-5	Styrene	ND		63	53.8
95-47-6	o-Xylene	ND		63	53.8
79-34-5	1,1,2,2-Tetrachloroethane	ND		130	53.8
96-18-4	1,2,3-Trichloropropane	ND		130	53.8
110-57-6	trans-1,4-Dichloro-2 butene	ND		130	53.8
98-82-8	Isopropylbenzene	ND		130	53.8
103-65-1	n-Propylbenzene	ND		130	53.8
108-67-8	1,3,5-Trimethylbenzene	ND		130	53.8
95-63-6	1,2,4-Trimethylbenzene	ND		130	53.8
541-73-1	1,3-Dichlorobenzene	ND		130	53.8
106-46-7	1,4-Dichlorobenzene	ND		130	53.8
95-50-1	1,2-Dichlorobenzene	ND		130	53.8
67-72-1	Hexachloroethane	ND		130	53.8
96-12-8	1,2-Dibromo-3-chloropropane	ND		320	53.8
120-82-1	1,2,4-Trichlorobenzene	ND		320	53.8
91-20-3	Naphthalene	ND		320	53.8
91-57-6	2-Methylnaphthalene	ND		320	53.8

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-06ME

Date Collected:	8/24/1999	Test Code:	SME
		Test Name:	Soil-MEOH
Date Analyzed:	8/26/1999 by WORM	Sample ID:	SS6
Total Solids:	77%		

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		350	53.4
74-87-3	Chloromethane	ND		350	53.4
75-01-4	Vinyl chloride	ND		140	53.4
74-83-9	Bromomethane	ND		350	53.4
75-00-3	Chloroethane	ND		350	53.4
75-69-4	Trichlorofluoromethane	ND		350	53.4
67-64-1	2-Propanone (Acetone)	ND		1000	53.4
60-29-7	Diethyl ether	ND		350	53.4
75-35-4	1,1-Dichloroethene	ND		69	53.4
74-88-4	Methyl iodide	ND		140	53.4
107-13-1	Acrylonitrile	ND		350	53.4
75-09-2	Methylene chloride	ND		350	53.4
75-15-0	Carbon disulfide	ND		350	53.4
156-60-5	trans-1,2-Dichloroethene	ND		69	53.4
1634-04-4	Methyltertbutylether (MTBE)	ND		350	53.4
75-34-3	1,1-Dichloroethane	ND		69	53.4
78-93-3	2-Butanone (MEK)	ND		350	53.4
156-59-2	cis-1,2-Dichloroethene	ND		69	53.4
67-66-3	Chloroform	ND		69	53.4
74-97-5	Bromochloromethane	ND		140	53.4
71-55-6	1,1,1-Trichloroethane	ND		69	53.4
107-06-2	1,2-Dichloroethane	ND		69	53.4
71-43-2	Benzene	ND		69	53.4
56-23-5	Carbon tetrachloride	ND		69	53.4
78-87-5	1,2-Dichloropropane	ND		69	53.4
79-01-6	Trichloroethene	ND		69	53.4
74-95-3	Dibromomethane	ND		140	53.4
75-27-4	Bromodichloromethane	ND		140	53.4
591-78-6	2-Hexanone	ND		350	53.4
10061-01-5	cis-1,3-Dichloropropene	ND		69	53.4
10061-02-6	trans-1,3-Dichloropropene	ND		69	53.4
108-88-3	Toluene	ND		69	53.4
79-00-5	1,1,2-Trichloroethane	ND		69	53.4
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		350	53.4
124-48-1	Dibromochloromethane	ND		140	53.4
106-93-4	1,2-Dibromoethane	ND		69	53.4

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		69	53.4
630-20-6	1,1,1,2-Tetrachloroethane	ND		140	53.4
108-90-7	Chlorobenzene	ND		69	53.4
100-41-4	Ethylbenzene	ND		69	53.4
108383,106423	m & p Xylene	ND		140	53.4
75-25-2	Bromoform	ND		140	53.4
100-42-5	Styrene	ND		69	53.4
95-47-6	o-Xylene	ND		69	53.4
79-34-5	1,1,2,2-Tetrachloroethane	ND		140	53.4
96-18-4	1,2,3-Trichloropropane	ND		140	53.4
110-57-6	trans-1,4-Dichloro-2 butene	ND		140	53.4
98-82-8	Isopropylbenzene	ND		140	53.4
103-65-1	n-Propylbenzene	ND		140	53.4
108-67-8	1,3,5-Trimethylbenzene	ND		140	53.4
95-63-6	1,2,4-Trimethylbenzene	ND		140	53.4
541-73-1	1,3-Dichlorobenzene	ND		140	53.4
106-46-7	1,4-Dichlorobenzene	ND		140	53.4
95-50-1	1,2-Dichlorobenzene	ND		140	53.4
67-72-1	Hexachloroethane	ND		140	53.4
96-12-8	1,2-Dibromo-3-chloropropane	ND		350	53.4
120-82-1	1,2,4-Trichlorobenzene	ND		350	53.4
91-20-3	Naphthalene	ND		350	53.4
91-57-6	2-Methylnaphthalene	ND		350	53.4

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-07ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SS7
Total Solids: 80%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		330	53.2
74-87-3	Chloromethane	ND		330	53.2
75-01-4	Vinyl chloride	ND		130	53.2
74-83-9	Bromomethane	ND		330	53.2
75-00-3	Chloroethane	ND		330	53.2
75-69-4	Trichlorofluoromethane	ND		330	53.2
67-64-1	2-Propanone (Acetone)	ND		1000	53.2
60-29-7	Diethyl ether	ND		330	53.2
75-35-4	1,1-Dichloroethene	ND		66	53.2
74-88-4	Methyl iodide	ND		130	53 2
107-13-1	Acrylonitrile	ND		330	53.2
75-09-2	Methylene chloride	ND		330	53.2
75-15-0	Carbon disulfide	ND		330	53.2
156-60-5	trans-1,2-Dichloroethene	ND		66	53.2
1634-04-4	Methyltertbutylether (MTBE)	ND		330	53.2
75-34-3	1,1-Dichloroethane	ND		66	53.2
78-93-3	2-Butanone (MEK)	ND		330	53.2
156-59-2	cis-1,2-Dichloroethene	ND		66	53.2
67-66-3	Chloroform	ND		66	53.2
74-97-5	Bromochloromethane	ND		130	53.2
71-55-6	1,1,1-Trichloroethane	ND		66	53.2
107-06-2	1,2-Dichloroethane	ND		66	53.2
71-43-2	Benzene	ND		66	53.2
56-23-5	Carbon tetrachloride	ND		66	53.2
78-87-5	1,2-Dichloropropane	ND		66	53.2
79-01-6	Trichloroethene	ND		66	53.2
74-95-3	Dibromomethane	ND		130	53.2
75-27-4	Bromodichloromethane	ND		130	53.2
591-78-6	2-Hexanone	ND		330	53.2
10061-01-5	cis-1,3-Dichloropropene	ND		66	53.2
10061-02-6	trans-1,3-Dichloropropene	ND		66	53.2
108-88-3	Toluene	ND		66	53.2
79-00-5	1,1,2-Trichloroethane	ND		66	53.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		330	53.2
124-48-1	Dibromochloromethane	ND		130	53.2
106-93-4	1,2-Dibromoethane	ND		66	53.2

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		66	53.2
630-20-6	1,1,1,2-Tetrachloroethane	ND		130	53.2
108-90-7	Chlorobenzene	ND		66	53.2
100-41-4	Ethylbenzene	ND		66	53.2
108383,106423	m & p Xylene	ND		130	53.2
75-25-2	Bromoform	ND		130	53.2
100-42-5	Styrene	ND		66	53.2
95-47-6	o-Xylene	ND		66	53.2
79-34-5	1,1,2,2-Tetrachloroethane	ND		130	53.2
96-18-4	1,2,3-Trichloropropane	ND		130	53.2
110-57-6	trans-1,4-Dichloro-2 butene	ND		130	53.2
98-82-8	Isopropylbenzene	ND		130	53.2
103-65-1	n-Propylbenzene	ND		130	53.2
108-67-8	1,3,5-Trimethylbenzene	ND		130	53.2
95-63-6	1,2,4-Trimethylbenzene	ND		130	53.2
541-73-1	1,3-Dichlorobenzene	ND		130	53.2
106-46-7	1,4-Dichlorobenzene	ND		130	53.2
95-50-1	1,2-Dichlorobenzene	ND		130	53.2
67-72-1	Hexachloroethane	ND		130	53.2
96-12-8	1,2-Dibromo-3-chloropropane	ND		330	53.2
120-82-1	1,2,4-Trichlorobenzene	ND		330	53.2
91-20-3	Naphthalene	ND		330	53.2
91-57-6	2-Methylnaphthalene	ND		330	53.2

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-08ME

Date Collected:	8/24/1999	Test Code:	SME
		Test Name:	Soil-MEOH
Date Analyzed:	8/26/1999 by WORM	Sample ID:	SS8
Total Solids:	83%		

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		300	50.3
74-87-3	Chloromethane	ND		300	50.3
75-01-4	Vinyl chloride	ND		120	50.3
74-83-9	Bromomethane	ND		300	50.3
75-00-3	Chloroethane	ND		300	50.3
75-69-4	Trichlorofluoromethane	ND		300	50.3
67-64-1	2-Propanone (Acetone)	ND		910	50.3
60-29-7	Diethyl ether	ND		300	50.3
75-35-4	1,1-Dichloroethene	ND		61	50.3
74-88-4	Methyl iodide	ND		120	50.3
107-13-1	Acrylonitrile	ND		300	50.3
75-09-2	Methylene chloride	ND		300	50.3
75-15-0	Carbon disulfide	ND		300	50.3
156-60-5	trans-1,2-Dichloroethene	ND		61	50.3
1634-04-4	Methyltertbutylether (MTBE)	ND		300	50.3
75-34-3	1,1-Dichloroethane	ND		61	50.3
78-93-3	2-Butanone (MEK)	ND		300	50.3
156-59-2	cis-1,2-Dichloroethene	ND		61	50.3
67-66-3	Chloroform	ND		61	50.3
74-97-5	Bromochloromethane	ND		120	50.3
71-55-6	1,1,1-Trichloroethane	ND		61	50.3
107-06-2	1,2-Dichloroethane	ND		61	50.3
71-43-2	Benzene	ND		61	50.3
56-23-5	Carbon tetrachloride	ND		61	50.3
78-87-5	1,2-Dichloropropane	ND		61	50.3
79-01-6	Trichloroethene	ND		61	50.3
74-95-3	Dibromomethane	ND		120	50.3
75-27-4	Bromodichloromethane	ND		120	50.3
591-78-6	2-Hexanone	ND		300	50.3
10061-01-5	cis-1,3-Dichloropropene	ND		61	50.3
10061-02-6	trans-1,3-Dichloropropene	ND		61	50.3
108-88-3	Toluene	ND		61	50.3
79-00-5	1,1,2-Trichloroethane	ND		61	50.3
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		300	50.3
124-48-1	Dibromochloromethane	ND		120	50.3
106-93-4	1,2-Dibromoethane	ND		61	50.3

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		61	50.3
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	50.3
108-90-7	Chlorobenzene	ND		61	50.3
100-41-4	Ethylbenzene	ND		61	50.3
108383,106423	m & p Xylene	ND		120	50.3
75-25-2	Bromoform	ND		120	50.3
100-42-5	Styrene	ND		61	50.3
95-47-6	o-Xylene	ND		61	50.3
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	50.3
96-18-4	1,2,3-Trichloropropane	ND		120	50.3
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	50.3
98-82-8	Isopropylbenzene	ND		120	50.3
103-65-1	n-Propylbenzene	ND		120	50.3
108-67-8	1,3,5-Trimethylbenzene	ND		120	50.3
95-63-6	1,2,4-Trimethylbenzene	ND		120	50.3
541-73-1	1,3-Dichlorobenzene	ND		120	50.3
106-46-7	1,4-Dichlorobenzene	ND		120	50.3
95-50-1	1,2-Dichlorobenzene	ND		120	50.3
67-72-1	Hexachloroethane	ND		120	50.3
96-12-8	1,2-Dibromo-3-chloropropane	ND		300	50.3
120-82-1	1,2,4-Trichlorobenzene	ND		300	50.3
91-20-3	Naphthalene	ND		300	50.3
91-57-6	2-Methylnaphthalene	ND		300	50.3

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-09ME

Date Collected:	8/24/1999	Test Code:	SME
		Test Name:	Soil-MEOH
Date Analyzed:	8/26/1999 by WORM	Sample ID:	SS9
Total Solids:	62%		

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		420	52 5
74-87-3	Chloromethane	ND		420	52.5
75-01-4	Vinyl chloride	ND		170	52.5
74-83-9	Bromomethane	ND		420	52.5
75-00-3	Chloroethane	ND		420	52.5
75-69-4	Trichlorofluoromethane	ND		420	52.5
67-64-1	2-Propanone (Acetone)	ND		1300	52.5
60-29-7	Diethyl ether	ND		420	52.5
75-35-4	1,1-Dichloroethene	ND		85	52.5
74-88-4	Methyl iodide	ND		170	52.5
107-13-1	Acrylonitrile	ND		420	52.5
75-09-2	Methylene chloride	ND		420	52.5
75-15-0	Carbon disulfide	ND		420	52.5
156-60-5	trans-1,2-Dichloroethene	ND		85	52.5
1634-04-4	Methyltertbutylether (MTBE)	ND		420	52.5
75-34-3	1,1-Dichloroethane	ND		85	52.5
78-93-3	2-Butanone (MEK)	ND		420	52.5
156-59-2	cis-1,2-Dichloroethene	ND		85	52.5
67-66-3	Chloroform	ND		85	52.5
74-97-5	Bromochloromethane	ND		170	52.5
71-55-6	1,1,1-Trichloroethane	ND		85	52.5
107-06-2	1,2-Dichloroethane	ND		85	52.5
71-43-2	Benzene	ND		85	52.5
56-23-5	Carbon tetrachloride	ND		85	52.5
78-87-5	1,2-Dichloropropane	ND		85	52.5
79-01-6	Trichloroethene	ND		85	52.5
74-95-3	Dibromomethane	ND		170	52.5
75-27-4	Bromodichloromethane	ND		170	52.5
591-78-6	2-Hexanone	ND		420	52.5
10061-01-5	cis-1,3-Dichloropropene	ND		85	52.5
10061-02-6	trans-1,3-Dichloropropene	ND		85	52.5
108-88-3	Toluene	ND		85	52.5
79-00-5	1,1,2-Trichloroethane	ND		85	52.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		420	52.5
124-48-1	Dibromochloromethane	ND		170	52.5
106-93-4	1,2-Dibromoethane	ND		85	52.5

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		85	52.5
630-20-6	1,1,1,2-Tetrachloroethane	ND		170	52.5
108-90-7	Chlorobenzene	ND		85	52.5
100-41-4	Ethylbenzene	ND		85	52.5
108383,106423	m & p Xylene	ND		170	52.5
75-25-2	Bromoform	ND		170	52.5
100-42-5	Styrene	ND		85	52.5
95-47-6	o-Xylene	ND		85	52.5
79-34-5	1,1,2,2-Tetrachloroethane	ND		170	52.5
96-18-4	1,2,3-Trichloropropane	ND		170	52.5
110-57-6	trans-1,4-Dichloro-2 butene	ND		170	52.5
98-82-8	Isopropylbenzene	ND		170	52.5
103-65-1	n-Propylbenzene	ND		170	52.5
108-67-8	1,3,5-Trimethylbenzene	ND		170	52.5
95-63-6	1,2,4-Trimethylbenzene	ND		170	52.5
541-73-1	1,3-Dichlorobenzene	ND		170	52.5
106-46-7	1,4-Dichlorobenzene	ND		170	52.5
95-50-1	1,2-Dichlorobenzene	ND		170	52.5
67-72-1	Hexachloroethane	ND		170	52.5
96-12-8	1,2-Dibromo-3-chloropropane	ND		420	52.5
120-82-1	1,2,4-Trichlorobenzene	ND		420	52.5
91-20-3	Naphthalene	ND		420	52.5
91-57-6	2-Methylnaphthalene	ND		420	52.5

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-10ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SS10
Total Solids: 90%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		390	69.4
74-87-3	Chloromethane	ND		390	69.4
75-01-4	Vinyl chloride	ND		150	69.4
74-83-9	Bromomethane	ND		390	69.4
75-00-3	Chloroethane	ND		390	69.4
75-69-4	Trichlorofluoromethane	ND		390	69.4
67-64-1	2-Propanone (Acetone)	ND		1200	69 4
60-29-7	Diethyl ether	ND		390	69.4
75-35-4	1,1-Dichloroethene	ND		77	69.4
74-88-4	Methyl iodide	ND		150	69.4
107-13-1	Acrylonitrile	ND		390	69.4
75-09-2	Methylene chloride	ND		390	69.4
75-15-0	Carbon disulfide	ND		390	69.4
156-60-5	trans-1,2-Dichloroethene	ND		77	69.4
1634-04-4	Methyltertbutylether (MTBE)	ND		390	69.4
75-34-3	1,1-Dichloroethane	ND		77	69.4
78-93-3	2-Butanone (MEK)	ND		390	69.4
156-59-2	cis-1,2-Dichloroethene	ND		77	69.4
67-66-3	Chloroform	ND		77	69.4
74-97-5	Bromochloromethane	ND		150	69.4
71-55-6	1,1,1-Trichloroethane	ND		77	69.4
107-06-2	1,2-Dichloroethane	ND		77	69.4
71-43-2	Benzene	ND		77	69.4
56-23-5	Carbon tetrachloride	ND		77	69.4
78-87-5	1,2-Dichloropropane	ND		77	69.4
79-01-6	Trichloroethene	ND		77	69.4
74-95-3	Dibromomethane	ND		150	69.4
75-27-4	Bromodichloromethane	ND		150	69.4
591-78-6	2-Hexanone	ND		390	69.4
10061-01-5	cis-1,3-Dichloropropene	ND		77	69.4
10061-02-6	trans-1,3-Dichloropropene	ND		77	69.4
108-88-3	Toluene	ND		77	69.4
79-00-5	1,1,2-Trichloroethane	ND		77	69.4
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		390	69.4
124-48-1	Dibromochloromethane	ND		150	69.4
106-93-4	1,2-Dibromoethane	ND		77	69.4

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		77	69.4
630-20-6	1,1,1,2-Tetrachloroethane	ND		150	69.4
108-90-7	Chlorobenzene	ND		77	69 4
100-41-4	Ethylbenzene	ND		77	69.4
108383,106423	m & p Xylene	ND		150	69.4
75-25-2	Bromoform	ND		150	69.4
100-42-5	Styrene	ND		77	69.4
95-47-6	o-Xylene	ND		77	69.4
79-34-5	1,1,2,2-Tetrachloroethane	ND		150	69.4
96-18-4	1,2,3-Trichloropropane	ND		150	69.4
110-57-6	trans-1,4-Dichloro-2 butene	ND		150	69.4
98-82-8	Isopropylbenzene	ND		150	69.4
103-65-1	n-Propylbenzene	ND		150	69.4
108-67-8	1,3,5-Trimethylbenzene	ND		150	69.4
95-63-6	1,2,4-Trimethylbenzene	ND		150	69.4
541-73-1	1,3-Dichlorobenzene	ND		150	69.4
106-46-7	1,4-Dichlorobenzene	ND		150	69.4
95-50-1	1,2-Dichlorobenzene	ND		150	69.4
67-72-1	Hexachloroethane	ND		150	69.4
96-12-8	1,2-Dibromo-3-chloropropane	ND		390	69.4
120-82-1	1,2,4-Trichlorobenzene	ND		390	69.4
91-20-3	Naphthalene	ND		390	69.4
91-57-6	2-Methylnaphthalene	ND		390	69.4

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-11ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SS11
Total Solids: 82%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		320	52.5
74-87-3	Chloromethane	ND		320	52.5
75-01-4	Vinyl chloride	ND		130	52.5
74-83-9	Bromomethane	ND		320	52.5
75-00-3	Chloroethane	ND		320	52.5
75-69-4	Trichlorofluoromethane	ND		320	52.5
67-64-1	2-Propanone (Acetone)	ND		960	52.5
60-29-7	Diethyl ether	ND		320	52.5
75-35-4	1,1-Dichloroethene	ND		64	52.5
74-88-4	Methyl iodide	ND		130	52.5
107-13-1	Acrylonitrile	ND		320	52.5
75-09-2	Methylene chloride	ND		320	52.5
75-15-0	Carbon disulfide	ND		320	52.5
156-60-5	trans-1,2-Dichloroethene	ND		64	52.5
1634-04-4	Methyltertbutylether (MTBE)	ND		320	52.5
75-34-3	1,1-Dichloroethane	ND		64	52.5
78-93-3	2-Butanone (MEK)	ND		320	52.5
156-59-2	cis-1,2-Dichloroethene	ND		64	52.5
67-66-3	Chloroform	ND		64	52.5
74-97-5	Bromochloromethane	ND		130	52.5
71-55-6	1,1,1-Trichloroethane	ND		64	52.5
107-06-2	1,2-Dichloroethane	ND		64	52.5
71-43-2	Benzene	ND		64	52.5
56-23-5	Carbon tetrachloride	ND		64	52.5
78-87-5	1,2-Dichloropropane	ND		64	52.5
79-01-6	Trichloroethene	ND		64	52.5
74-95-3	Dibromomethane	ND		130	52.5
75-27-4	Bromodichloromethane	ND		130	52.5
591-78-6	2-Hexanone	ND		320	52.5
10061-01-5	cis-1,3-Dichloropropene	ND		64	52.5
10061-02-6	trans-1,3-Dichloropropene	ND		64	52.5
108-88-3	Toluene	ND		64	52.5
79-00-5	1,1,2-Trichloroethane	ND		64	52.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		320	52.5
124-48-1	Dibromochloromethane	ND		130	52.5
106-93-4	1,2-Dibromoethane	ND		64	52.5

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		64	52.5
630-20-6	1,1,1,2-Tetrachloroethane	ND		130	52.5
108-90-7	Chlorobenzene	ND		64	52.5
100-41-4	Ethylbenzene	ND		64	52 5
108383,106423	m & p Xylene	ND		130	52.5
75-25-2	Bromoform	ND		130	52.5
100-42-5	Styrene	ND		64	52.5
95-47-6	o-Xylene	ND		64	52.5
79-34-5	1,1,2,2-Tetrachloroethane	ND		130	52.5
96-18-4	1,2,3-Trichloropropane	ND		130	52.5
110-57-6	trans-1,4-Dichloro-2 butene	ND		130	52.5
98-82-8	Isopropylbenzene	ND		130	52.5
103-65-1	n-Propylbenzene	ND		130	52.5
108-67-8	1,3,5-Trimethylbenzene	ND		130	52.5
95-63-6	1,2,4-Trimethylbenzene	ND		130	52 5
541-73-1	1,3-Dichlorobenzene	ND		130	52.5
106-46-7	1,4-Dichlorobenzene	ND		130	52.5
95-50-1	1,2-Dichlorobenzene	ND		130	52.5
67-72-1	Hexachloroethane	ND		130	52.5
96-12-8	1,2-Dibromo-3-chloropropane	ND		320	52.5
120-82-1	1,2,4-Trichlorobenzene	ND		320	52.5
91-20-3	Naphthalene	ND		320	52.5
91-57-6	2-Methylnaphthalene	ND		320	52.5

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-12ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SS12
Total Solids: 78%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		330	51.6
74-87-3	Chloromethane	ND		330	51.6
75-01-4	Vinyl chloride	ND		130	51.6
74-83-9	Bromomethane	ND		330	51.6
75-00-3	Chloroethane	ND		330	51.6
75-69-4	Trichlorofluoromethane	ND		330	51.6
67-64-1	2-Propanone (Acetone)	ND		990	51.6
60-29-7	Diethyl ether	ND		330	51.6
75-35-4	1,1-Dichloroethene	ND		66	51.6
74-88-4	Methyl iodide	ND		130	51.6
107-13-1	Acrylonitrile	ND		330	51.6
75-09-2	Methylene chloride	ND		330	51.6
75-15-0	Carbon disulfide	ND		330	51.6
156-60-5	trans-1,2-Dichloroethene	ND		66	51.6
1634-04-4	Methyltertbutylether (MTBE)	ND		330	51.6
75-34-3	1,1-Dichloroethane	ND		66	51.6
78-93-3	2-Butanone (MEK)	ND		330	51.6
156-59-2	cis-1,2-Dichloroethene	ND		66	51.6
67-66-3	Chloroform	ND		66	51.6
74-97-5	Bromochloromethane	ND		130	51.6
71-55-6	1,1,1-Trichloroethane	ND		66	51.6
107-06-2	1,2-Dichloroethane	ND		66	51.6
71-43-2	Benzene	ND		66	51.6
56-23-5	Carbon tetrachloride	ND		66	51.6
78-87-5	1,2-Dichloropropane	ND		66	51.6
79-01-6	Trichloroethene	ND		66	51.6
74-95-3	Dibromomethane	ND		130	51.6
75-27-4	Bromodichloromethane	ND		130	51.6
591-78-6	2-Hexanone	ND		330	51.6
10061-01-5	cis-1,3-Dichloropropene	ND		66	51.6
10061-02-6	trans-1,3-Dichloropropene	ND		66	51.6
108-88-3	Toluene	ND		66	51.6
79-00-5	1,1,2-Trichloroethane	ND		66	51.6
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		330	51.6
124-48-1	Dibromochloromethane	ND		130	51.6
106-93-4	1,2-Dibromoethane	ND		66	51.6

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		66	51.6
630-20-6	1,1,1,2-Tetrachloroethane	ND		130	51.6
108-90-7	Chlorobenzene	ND		66	51.6
100-41-4	Ethylbenzene	ND		66	51 6
108383,106423	m & p Xylene	ND		130	51.6
75-25-2	Bromoform	ND		130	51.6
100-42-5	Styrene	ND		66	51.6
95-47-6	o-Xylene	ND		66	51.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		130	51.6
96-18-4	1,2,3-Trichloropropane	ND		130	51.6
110-57-6	trans-1,4-Dichloro-2 butene	ND		130	51.6
98-82-8	Isopropylbenzene	ND		130	51.6
103-65-1	n-Propylbenzene	ND		130	51 6
108-67-8	1,3,5-Trimethylbenzene	ND		130	51.6
95-63-6	1,2,4-Trimethylbenzene	ND		130	51.6
541-73-1	1,3-Dichlorobenzene	ND		130	51 6
106-46-7	1,4-Dichlorobenzene	ND		130	51.6
95-50-1	1,2-Dichlorobenzene	ND		130	51.6
67-72-1	Hexachloroethane	ND		130	51.6
96-12-8	1,2-Dibromo-3-chloropropane	ND		330	51.6
120-82-1	1,2,4-Trichlorobenzene	ND		330	51.6
91-20-3	Naphthalene	ND		330	51.6
91-57-6	2-Methylnaphthalene	ND		330	51.6

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-13ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SS13
Total Solids: 91%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		300	53.9
74-87-3	Chloromethane	ND		300	53.9
75-01-4	Vinyl chloride	ND		120	53.9
74-83-9	Bromomethane	ND		300	53.9
75-00-3	Chloroethane	ND		300	53.9
75-69-4	Trichlorofluoromethane	ND		300	53.9
67-64-1	2-Propanone (Acetone)	ND		890	53.9
60-29-7	Diethyl ether	ND		300	53.9
75-35-4	1,1-Dichloroethene	ND		59	53.9
74-88-4	Methyl iodide	ND		120	53.9
107-13-1	Acrylonitrile	ND		300	53.9
75-09-2	Methylene chloride	ND		300	53.9
75-15-0	Carbon disulfide	ND		300	53.9
156-60-5	trans-1,2-Dichloroethene	ND		59	53.9
1634-04-4	Methyltertbutylether (MTBE)	ND		300	53.9
75-34-3	1,1-Dichloroethane	ND		59	53.9
78-93-3	2-Butanone (MEK)	ND		300	53.9
156-59-2	cis-1,2-Dichloroethene	ND		59	53.9
67-66-3	Chloroform	ND		59	53.9
74-97-5	Bromochloromethane	ND		120	53.9
71-55-6	1,1,1-Trichloroethane	ND		59	53.9
107-06-2	1,2-Dichloroethane	ND		59	53.9
71-43-2	Benzene	ND		59	53.9
56-23-5	Carbon tetrachloride	ND		59	53.9
78-87-5	1,2-Dichloropropane	ND		59	53.9
79-01-6	Trichloroethene	ND		59	53.9
74-95-3	Dibromomethane	ND		120	53.9
75-27-4	Bromodichloromethane	ND		120	53.9
591-78-6	2-Hexanone	ND		300	53.9
10061-01-5	cis-1,3-Dichloropropene	ND		59	53.9
10061-02-6	trans-1,3-Dichloropropene	ND		59	53.9
108-88-3	Toluene	ND		59	53.9
79-00-5	1,1,2-Trichloroethane	ND		59	53.9
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		300	53.9
124-48-1	Dibromochloromethane	ND		120	53.9
106-93-4	1,2-Dibromoethane	ND		59	53.9

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		59	53.9
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	53.9
108-90-7	Chlorobenzene	ND		59	53.9
100-41-4	Ethylbenzene	ND		59	53.9
108383,106423	m & p Xylene	ND		120	53.9
75-25-2	Bromoform	ND		120	53.9
100-42-5	Styrene	ND		59	53.9
95-47-6	o-Xylene	ND		59	53.9
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	53.9
96-18-4	1,2,3-Trichloropropane	ND		120	53.9
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	53.9
98-82-8	Isopropylbenzene	ND		120	53.9
103-65-1	n-Propylbenzene	ND		120	53.9
108-67-8	1,3,5-Trimethylbenzene	ND		120	53.9
95-63-6	1,2,4-Trimethylbenzene	ND		120	53.9
541-73-1	1,3-Dichlorobenzene	ND		120	53.9
106-46-7	1,4-Dichlorobenzene	ND		120	53.9
95-50-1	1,2-Dichlorobenzene	ND		120	53.9
67-72-1	Hexachloroethane	ND		120	53.9
96-12-8	1,2-Dibromo-3-chloropropane	ND		300	53.9
120-82-1	1,2,4-Trichlorobenzene	ND		300	53.9
91-20-3	Naphthalene	ND		300	53.9
91-57-6	2-Methylnaphthalene	ND		300	53.9

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-14ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SS14
Total Solids: 85%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		310	53.2
74-87-3	Chloromethane	ND		310	53.2
75-01-4	Vinyl chloride	ND		130	53.2
74-83-9	Bromomethane	ND		310	53.2
75-00-3	Chloroethane	ND		310	53.2
75-69-4	Trichlorofluoromethane	ND		310	53.2
67-64-1	2-Propanone (Acetone)	ND		940	53.2
60-29-7	Diethyl ether	ND		310	53.2
75-35-4	1,1-Dichloroethene	ND		63	53.2
74-88-4	Methyl iodide	ND		130	53.2
107-13-1	Acrylonitrile	ND		310	53.2
75-09-2	Methylene chloride	ND		310	53.2
75-15-0	Carbon disulfide	ND		310	53.2
156-60-5	trans-1,2-Dichloroethene	ND		63	53.2
1634-04-4	Methyltertbutylether (MTBE)	ND		310	53.2
75-34-3	1,1-Dichloroethane	ND		63	53.2
78-93-3	2-Butanone (MEK)	ND		310	53.2
156-59-2	cis-1,2-Dichloroethene	ND		63	53.2
67-66-3	Chloroform	ND		63	53.2
74-97-5	Bromochloromethane	ND		130	53.2
71-55-6	1,1,1-Trichloroethane	ND		63	53.2
107-06-2	1,2-Dichloroethane	ND		63	53.2
71-43-2	Benzene	ND		63	53.2
56-23-5	Carbon tetrachloride	ND		63	53.2
78-87-5	1,2-Dichloropropane	ND		63	53.2
79-01-6	Trichloroethene	ND		63	53.2
74-95-3	Dibromomethane	ND		130	53.2
75-27-4	Bromodichloromethane	ND		130	53.2
591-78-6	2-Hexanone	ND		310	53.2
10061-01-5	cis-1,3-Dichloropropene	ND		63	53.2
10061-02-6	trans-1,3-Dichloropropene	ND		63	53.2
108-88-3	Toluene	ND		63	53.2
79-00-5	1,1,2-Trichloroethane	ND		63	53.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		310	53.2
124-48-1	Dibromochloromethane	ND		130	53.2
106-93-4	1,2-Dibromoethane	ND		63	53.2

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		63	53.2
630-20-6	1,1,1,2-Tetrachloroethane	ND		130	53.2
108-90-7	Chlorobenzene	ND		63	53.2
100-41-4	Ethylbenzene	ND		63	53.2
108383,106423	m & p Xylene	ND		130	53.2
75-25-2	Bromoform	ND		130	53.2
100-42-5	Styrene	ND		63	53.2
95-47-6	o-Xylene	ND		63	53.2
79-34-5	1,1,2,2-Tetrachloroethane	ND		130	53.2
96-18-4	1,2,3-Trichloropropane	ND		130	53.2
110-57-6	trans-1,4-Dichloro-2 butene	ND		130	53.2
98-82-8	Isopropylbenzene	ND		130	53 2
103-65-1	n-Propylbenzene	ND		130	53.2
108-67-8	1,3,5-Trimethylbenzene	ND		130	53.2
95-63-6	1,2,4-Trimethylbenzene	ND		130	53.2
541-73-1	1,3-Dichlorobenzene	ND		130	53 2
106-46-7	1,4-Dichlorobenzene	ND		130	53.2
95-50-1	1,2-Dichlorobenzene	ND		130	53.2
67-72-1	Hexachloroethane	ND		130	53.2
96-12-8	1,2-Dibromo-3-chloropropane	ND		310	53.2
120-82-1	1,2,4-Trichlorobenzene	ND		310	53.2
91-20-3	Naphthalene	ND		310	53.2
91-57-6	2-Methylnaphthalene	ND		310	53.2

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-15ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SS15
Total Solids: 89%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		310	55.4
74-87-3	Chloromethane	ND		310	55.4
75-01-4	Vinyl chloride	ND		120	55.4
74-83-9	Bromomethane	ND		310	55.4
75-00-3	Chloroethane	ND		310	55.4
75-69-4	Trichlorofluoromethane	ND		310	55.4
67-64-1	2-Propanone (Acetone)	ND		930	55.4
60-29-7	Diethyl ether	ND		310	55.4
75-35-4	1,1-Dichloroethene	ND		62	55.4
74-88-4	Methyl iodide	ND		120	55.4
107-13-1	Acrylonitrile	ND		310	55.4
75-09-2	Methylene chloride	ND		310	55.4
75-15-0	Carbon disulfide	ND		310	55.4
156-60-5	trans-1,2-Dichloroethene	ND		62	55.4
1634-04-4	Methyltertbutylether (MTBE)	ND		310	55.4
75-34-3	1,1-Dichloroethane	ND		62	55.4
78-93-3	2-Butanone (MEK)	ND		310	55.4
156-59-2	cis-1,2-Dichloroethene	ND		62	55.4
67-66-3	Chloroform	ND		62	55.4
74-97-5	Bromochloromethane	ND		120	55.4
71-55-6	1,1,1-Trichloroethane	ND		62	55.4
107-06-2	1,2-Dichloroethane	ND		62	55.4
71-43-2	Benzene	ND		62	55.4
56-23-5	Carbon tetrachloride	ND		62	55.4
78-87-5	1,2-Dichloropropane	ND		62	55.4
79-01-6	Trichloroethene	ND		62	55.4
74-95-3	Dibromomethane	ND		120	55.4
75-27-4	Bromodichloromethane	ND		120	55.4
591-78-6	2-Hexanone	ND		310	55.4
10061-01-5	cis-1,3-Dichloropropene	ND		62	55.4
10061-02-6	trans-1,3-Dichloropropene	ND		62	55.4
108-88-3	Toluene	ND		62	55.4
79-00-5	1,1,2-Trichloroethane	ND		62	55.4
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		310	55.4
124-48-1	Dibromochloromethane	ND		120	55.4
'06-93-4	1,2-Dibromoethane	ND		62	55.4

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		62	55.4
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	55 4
108-90-7	Chlorobenzene	ND		62	55.4
100-41-4	Ethylbenzene	ND		62	55.4
108383,106423	m & p Xylene	ND		120	55.4
75-25-2	Bromoform	ND		120	55.4
100-42-5	Styrene	ND		62	55.4
95-47-6	o-Xylene	ND		62	55.4
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	55.4
96-18-4	1,2,3-Trichloropropane	ND		120	55.4
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	55.4
98-82-8	Isopropylbenzene	ND		120	55.4
103-65-1	n-Propylbenzene	ND		120	55.4
108-67-8	1,3,5-Trimethylbenzene	ND		120	55.4
95-63-6	1,2,4-Trimethylbenzene	ND		120	55.4
541-73-1	1,3-Dichlorobenzene	ND		120	55.4
106-46-7	1,4-Dichlorobenzene	ND		120	55.4
95-50-1	1,2-Dichlorobenzene	ND		120	55.4
67-72-1	Hexachloroethane	ND		120	55.4
96-12-8	1,2-Dibromo-3-chloropropane	ND		310	55.4
120-82-1	1,2,4-Trichlorobenzene	ND		310	55.4
91-20-3	Naphthalene	ND		310	55.4
91-57-6	2-Methylnaphthalene	ND		310	55.4

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-16ME

Date Collected:	8/24/1999	Test Code:	SME
		Test Name:	Soil-MEOH
Date Analyzed:	8/26/1999 by WORM	Sample ID:	SS16
Total Solids:	92%		

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		290	54.1
74-87-3	Chloromethane	ND		290	54.1
75-01-4	Vinyl chloride	ND		120	54.1
74-83-9	Bromomethane	ND		290	54.1
75-00-3	Chloroethane	ND		290	54.1
75-69-4	Trichlorofluoromethane	ND		290	54.1
67-64-1	2-Propanone (Acetone)	ND		880	54.1
60-29-7	Diethyl ether	ND		290	54.1
75-35-4	1,1-Dichloroethene	ND		59	54.1
74-88-4	Methyl iodide	ND		120	54.1
107-13-1	Acrylonitrile	ND		290	54.1
75-09-2	Methylene chloride	ND		290	54.1
75-15-0	Carbon disulfide	ND		290	54.1
156-60-5	trans-1,2-Dichloroethene	ND		59	54.1
1634-04-4	Methyltertbutylether (MTBE)	ND		290	54.1
75-34-3	1,1-Dichloroethane	ND		59	54.1
78-93-3	2-Butanone (MEK)	ND		290	54.1
156-59-2	cis-1,2-Dichloroethene	ND		59	54.1
67-66-3	Chloroform	ND		59	54.1
74-97-5	Bromochloromethane	ND		120	54.1
71-55-6	1,1,1-Trichloroethane	ND		59	54.1
107-06-2	1,2-Dichloroethane	ND		59	54.1
71-43-2	Benzene	ND		59	54.1
56-23-5	Carbon tetrachloride	ND		59	54.1
78-87-5	1,2-Dichloropropane	ND		59	54.1
79-01-6	Trichloroethene	ND		59	54.1
74-95-3	Dibromomethane	ND		120	54.1
75-27-4	Bromodichloromethane	ND		120	54.1
591-78-6	2-Hexanone	ND		290	54.1
10061-01-5	cis-1,3-Dichloropropene	ND		59	54.1
10061-02-6	trans-1,3-Dichloropropene	ND		59	54.1
108-88-3	Toluene	70		59	54.1
79-00-5	1,1,2-Trichloroethane	ND		59	54.1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		290	54.1
124-48-1	Dibromochloromethane	ND		120	54.1
106-93-4	1,2-Dibromoethane	ND		59	54.1

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		59	54.1
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	54.1
108-90-7	Chlorobenzene	ND		59	54.1
100-41-4	Ethylbenzene	ND		59	54.1
108383,106423	m & p Xylene	ND		120	54.1
75-25-2	Bromoform	ND		120	54.1
100-42-5	Styrene	ND		59	54.1
95-47-6	o-Xylene	ND		59	54.1
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	54.1
96-18-4	1,2,3-Trichloropropane	ND		120	54.1
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	54.1
98-82-8	Isopropylbenzene	ND		120	54.1
103-65-1	n-Propylbenzene	ND		120	54.1
108-67-8	1,3,5-Trimethylbenzene	ND		120	54.1
95-63-6	1,2,4-Trimethylbenzene	ND		120	54.1
541-73-1	1,3-Dichlorobenzene	ND		120	54.1
106-46-7	1,4-Dichlorobenzene	ND		120	54.1
95-50-1	1,2-Dichlorobenzene	ND		120	54.1
67-72-1	Hexachloroethane	ND		120	54.1
96-12-8	1,2-Dibromo-3-chloropropane	ND		290	54.1
120-82-1	1,2,4-Trichlorobenzene	ND		290	54.1
91-20-3	Naphthalene	ND		290	54.1
91-57-6	2-Methylnaphthalene	ND		290	54.1

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-17ME

Date Collected:	8/24/1999	Test Code:	SME
		Test Name:	Soil-MEOH
Date Analyzed:	8/26/1999 by WORM	Sample ID:	SS17
Total Solids:	92%		

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		280	51.1
74-87-3	Chloromethane	ND		280	51.1
75-01-4	Vinyl chloride	ND		110	51.1
74-83-9	Bromomethane	ND		280	51.1
75-00-3	Chloroethane	ND		280	51.1
75-69-4	Trichlorofluoromethane	ND		280	51.1
67-64-1	2-Propanone (Acetone)	ND		830	51.1
60-29-7	Diethyl ether	ND		280	51.1
75-35-4	1,1-Dichloroethene	ND		56	51.1
74-88-4	Methyl iodide	ND		110	51.1
107-13-1	Acrylonitrile	ND		280	51.1
75-09-2	Methylene chloride	ND		280	51.1
75-15-0	Carbon disulfide	ND		280	51.1
156-60-5	trans-1,2-Dichloroethene	ND		56	51.1
1634-04-4	Methyltertbutylether (MTBE)	ND		280	51.1
75-34-3	1,1-Dichloroethane	ND		56	51.1
78-93-3	2-Butanone (MEK)	ND		280	51.1
156-59-2	cis-1,2-Dichloroethene	ND		56	51.1
67-66-3	Chloroform	ND		56	51.1
74-97-5	Bromochloromethane	ND		110	51.1
71-55-6	1,1,1-Trichloroethane	ND		56	51.1
107-06-2	1,2-Dichloroethane	ND		56	51.1
71-43-2	Benzene	ND		56	51.1
56-23-5	Carbon tetrachloride	ND		56	51.1
78-87-5	1,2-Dichloropropane	ND		56	51.1
79-01-6	Trichloroethene	ND		56	51.1
74-95-3	Dibromomethane	ND		110	51.1
75-27-4	Bromodichloromethane	ND		110	51.1
591-78-6	2-Hexanone	ND		280	51.1
10061-01-5	cis-1,3-Dichloropropene	ND		56	51.1
10061-02-6	trans-1,3-Dichloropropene	ND		56	51.1
108-88-3	Toluene	ND		56	51.1
79-00-5	1,1,2-Trichloroethane	ND		56	51.1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		280	51.1
124-48-1	Dibromochloromethane	ND		110	51.1
106-93-4	1,2-Dibromoethane	ND		56	51.1

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		56	51.1
630-20-6	1,1,1,2-Tetrachloroethane	ND		110	51.1
108-90-7	Chlorobenzene	ND		56	51.1
100-41-4	Ethylbenzene	ND		56	51.1
108383,106423	m & p Xylene	ND		110	51.1
75-25-2	Bromoform	ND		110	51.1
100-42-5	Styrene	ND		56	51.1
95-47-6	o-Xylene	ND		56	51.1
79-34-5	1,1,2,2-Tetrachloroethane	ND		110	51.1
96-18-4	1,2,3-Trichloropropane	ND		110	51.1
110-57-6	trans-1,4-Dichloro-2 butene	ND		110	51.1
98-82-8	Isopropylbenzene	ND		110	51.1
103-65-1	n-Propylbenzene	ND		110	51.1
108-67-8	1,3,5-Trimethylbenzene	ND		110	51.1
95-63-6	1,2,4-Trimethylbenzene	ND		110	51.1
541-73-1	1,3-Dichlorobenzene	ND		110	51.1
106-46-7	1,4-Dichlorobenzene	ND		110	51.1
95-50-1	1,2-Dichlorobenzene	ND		110	51.1
67-72-1	Hexachloroethane	ND		110	51.1
96-12-8	1,2-Dibromo-3-chloropropane	ND		280	51.1
120-82-1	1,2,4-Trichlorobenzene	ND		280	51.1
91-20-3	Naphthalene	ND		280	51.1
91-57-6	2-Methylnaphthalene	ND		280	51.1

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-18ME

Date Collected:	8/24/1999	Test Code:	SME
		Test Name:	Soil-MEOH
Date Analyzed:	8/26/1999 by WORM	Sample ID:	SS18
Total Solids:	93%		

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		270	49.8
74-87-3	Chloromethane	ND		270	49.8
75-01-4	Vinyl chloride	ND		110	49.8
74-83-9	Bromomethane	ND		270	49.8
75-00-3	Chloroethane	ND		270	49.8
75-69-4	Trichlorofluoromethane	ND		270	49.8
67-64-1	2-Propanone (Acetone)	ND		800	49.8
60-29-7	Diethyl ether	ND		270	49.8
75-35-4	1,1-Dichloroethene	ND		54	49.8
74-88-4	Methyl iodide	ND		110	49.8
107-13-1	Acrylonitrile	ND		270	49.8
75-09-2	Methylene chloride	ND		270	49.8
75-15-0	Carbon disulfide	ND		270	49.8
156-60-5	trans-1,2-Dichloroethene	ND		54	49.8
1634-04-4	Methyltertbutylether (MTBE)	ND		270	49.8
75-34-3	1,1-Dichloroethane	ND		54	49.8
78-93-3	2-Butanone (MEK)	ND		270	49.8
156-59-2	cis-1,2-Dichloroethene	ND		54	49.8
67-66-3	Chloroform	ND		54	49.8
74-97-5	Bromochloromethane	ND		110	49.8
71-55-6	1,1,1-Trichloroethane	ND		54	49.8
107-06-2	1,2-Dichloroethane	ND		54	49.8
71-43-2	Benzene	ND		54	49.8
56-23-5	Carbon tetrachloride	ND		54	49.8
78-87-5	1,2-Dichloropropane	ND		54	49.8
79-01-6	Trichloroethene	ND		54	49.8
74-95-3	Dibromomethane	ND		110	49.8
75-27-4	Bromodichloromethane	ND		110	49.8
591-78-6	2-Hexanone	ND		270	49.8
10061-01-5	cis-1,3-Dichloropropene	ND		54	49.8
10061-02-6	trans-1,3-Dichloropropene	ND		54	49.8
108-88-3	Toluene	ND		54	49.8
79-00-5	1,1,2-Trichloroethane	ND		54	49.8
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		270	49.8
124-48-1	Dibromochloromethane	ND		110	49.8
106-93-4	1,2-Dibromoethane	ND		54	49.8

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		54	49.8
630-20-6	1,1,1,2-Tetrachloroethane	ND		110	49.8
108-90-7	Chlorobenzene	ND		54	49.8
100-41-4	Ethylbenzene	ND		54	49.8
108383,106423	m & p Xylene	ND		110	49.8
75-25-2	Bromoform	ND		110	49.8
100-42-5	Styrene	ND		54	49.8
95-47-6	o-Xylene	ND		54	49.8
79-34-5	1,1,2,2-Tetrachloroethane	ND		110	49.8
96-18-4	1,2,3-Trichloropropane	ND		110	49.8
110-57-6	trans-1,4-Dichloro-2 butene	ND		110	49.8
98-82-8	Isopropylbenzene	ND		110	49.8
103-65-1	n-Propylbenzene	ND		110	49.8
108-67-8	1,3,5-Trimethylbenzene	ND		110	49.8
95-63-6	1,2,4-Trimethylbenzene	ND		110	49.8
541-73-1	1,3-Dichlorobenzene	ND		110	49.8
106-46-7	1,4-Dichlorobenzene	ND		110	49.8
95-50-1	1,2-Dichlorobenzene	ND		110	49.8
67-72-1	Hexachloroethane	ND		110	49.8
96-12-8	1,2-Dibromo-3-chloropropane	ND		270	49.8
120-82-1	1,2,4-Trichlorobenzene	ND		270	49.8
91-20-3	Naphthalene	ND		270	49.8
91-57-6	2-Methylnaphthalene	ND		270	49.8

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-19ME

Date Collected:	8/24/1999	Test Code:	SME
		Test Name:	Soil-MEOH
Date Analyzed:	8/26/1999 by WORM	Sample ID:	SS19
Total Solids:	84%		

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		330	55.1
74-87-3	Chloromethane	ND		330	55.1
75-01-4	Vinyl chloride	ND		130	55.1
74-83-9	Bromomethane	ND		330	55.1
75-00-3	Chloroethane	ND		330	55.1
75-69-4	Trichlorofluoromethane	ND		330	55.1
67-64-1	2-Propanone (Acetone)	ND		980	55.1
60-29-7	Diethyl ether	ND		330	55.1
75-35-4	1,1-Dichloroethene	ND		66	55.1
74-88-4	Methyl iodide	ND		130	55.1
107-13-1	Acrylonitrile	ND		330	55.1
75-09-2	Methylene chloride	ND		330	55.1
75-15-0	Carbon disulfide	ND		330	55.1
156-60-5	trans-1,2-Dichloroethene	ND		66	55.1
1634-04-4	Methyltertbutylether (MTBE)	ND		330	55.1
75-34-3	1,1-Dichloroethane	ND		66	55.1
78-93-3	2-Butanone (MEK)	ND		330	55.1
156-59-2	cis-1,2-Dichloroethene	ND		66	55.1
67-66-3	Chloroform	ND		66	55.1
74-97-5	Bromochloromethane	ND		130	55.1
71-55-6	1,1,1-Trichloroethane	ND		66	55.1
107-06-2	1,2-Dichloroethane	ND		66	55.1
71-43-2	Benzene	ND		66	55.1
56-23-5	Carbon tetrachloride	ND		66	55.1
78-87-5	1,2-Dichloropropane	ND		66	55.1
79-01-6	Trichloroethene	ND		66	55.1
74-95-3	Dibromomethane	ND		130	55.1
75-27-4	Bromodichloromethane	ND		130	55.1
591-78-6	2-Hexanone	ND		330	55.1
10061-01-5	cis-1,3-Dichloropropene	ND		66	55.1
10061-02-6	trans-1,3-Dichloropropene	ND		66	55.1
108-88-3	Toluene	ND		66	55.1
79-00-5	1,1,2-Trichloroethane	ND		66	55.1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		330	55.1
124-48-1	Dibromochloromethane	ND		130	55.1
106-93-4	1,2-Dibromoethane	ND		66	55.1

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		66	55.1
630-20-6	1,1,1,2-Tetrachloroethane	ND		130	55.1
108-90-7	Chlorobenzene	ND		66	55.1
100-41-4	Ethylbenzene	ND		66	55.1
108383,106423	m & p Xylene	ND		130	55.1
75-25-2	Bromoform	ND		130	55.1
100-42-5	Styrene	ND		66	55.1
95-47-6	o-Xylene	ND		66	55.1
79-34-5	1,1,2,2-Tetrachloroethane	ND		130	55.1
96-18-4	1,2,3-Trichloropropane	ND		130	55.1
110-57-6	trans-1,4-Dichloro-2 butene	ND		130	55.1
98-82-8	Isopropylbenzene	ND		130	55.1
103-65-1	n-Propylbenzene	ND		130	55.1
108-67-8	1,3,5-Trimethylbenzene	ND		130	55.1
95-63-6	1,2,4-Trimethylbenzene	ND		130	55.1
541-73-1	1,3-Dichlorobenzene	ND		130	55.1
106-46-7	1,4-Dichlorobenzene	ND		130	55.1
95-50-1	1,2-Dichlorobenzene	ND		130	55.1
67-72-1	Hexachloroethane	ND		130	55.1
96-12-8	1,2-Dibromo-3-chloropropane	ND		330	55.1
120-82-1	1,2,4-Trichlorobenzene	ND		330	55.1
91-20-3	Naphthalene	ND		330	55.1
91-57-6	2-Methylnaphthalene	ND		330	55.1

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-20ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SS20
Total Solids: 90%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		300	53.7
74-87-3	Chloromethane	ND		300	53.7
75-01-4	Vinyl chloride	ND		120	53.7
74-83-9	Bromomethane	ND		300	53.7
75-00-3	Chloroethane	ND		300	53.7
75-69-4	Trichlorofluoromethane	ND		300	53.7
67-64-1	2-Propanone (Acetone)	ND		900	53.7
60-29-7	Diethyl ether	ND		300	53.7
75-35-4	1,1-Dichloroethene	ND		60	53.7
74-88-4	Methyl iodide	ND		120	53.7
107-13-1	Acrylonitrile	ND		300	53.7
75-09-2	Methylene chloride	ND		300	53.7
75-15-0	Carbon disulfide	ND		300	53.7
156-60-5	trans-1,2-Dichloroethene	ND		60	53.7
1634-04-4	Methyltertbutylether (MTBE)	ND		300	53.7
75-34-3	1,1-Dichloroethane	ND		60	53.7
78-93-3	2-Butanone (MEK)	ND		300	53.7
156-59-2	cis-1,2-Dichloroethene	ND		60	53.7
67-66-3	Chloroform	ND		60	53.7
74-97-5	Bromochloromethane	ND		120	53.7
71-55-6	1,1,1-Trichloroethane	ND		60	53.7
107-06-2	1,2-Dichloroethane	ND		60	53.7
71-43-2	Benzene	ND		60	53.7
56-23-5	Carbon tetrachloride	ND		60	53.7
78-87-5	1,2-Dichloropropane	ND		60	53.7
79-01-6	Trichloroethene	ND		60	53.7
74-95-3	Dibromomethane	ND		120	53.7
75-27-4	Bromodichloromethane	ND		120	53.7
591-78-6	2-Hexanone	ND		300	53.7
10061-01-5	cis-1,3-Dichloropropene	ND		60	53.7
10061-02-6	trans-1,3-Dichloropropene	ND		60	53.7
108-88-3	Toluene	ND		60	53.7
79-00-5	1,1,2-Trichloroethane	ND		60	53.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		300	53.7
124-48-1	Dibromochloromethane	ND		120	53.7
106-93-4	1,2-Dibromoethane	ND		60	53.7

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		60	53.7
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	53.7
108-90-7	Chlorobenzene	ND		60	53.7
100-41-4	Ethylbenzene	ND		60	53.7
108383,106423	m & p Xylene	ND		120	53.7
75-25-2	Bromoform	ND		120	53.7
100-42-5	Styrene	ND		60	53.7
95-47-6	o-Xylene	ND		60	53.7
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	53.7
96-18-4	1,2,3-Trichloropropane	ND		120	53.7
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	53.7
98-82-8	Isopropylbenzene	ND		120	53.7
103-65-1	n-Propylbenzene	ND		120	53.7
108-67-8	1,3,5-Trimethylbenzene	ND		120	53.7
95-63-6	1,2,4-Trimethylbenzene	ND		120	53 7
541-73-1	1,3-Dichlorobenzene	ND		120	53.7
106-46-7	1,4-Dichlorobenzene	ND		120	53.7
95-50-1	1,2-Dichlorobenzene	ND		120	53 7
67-72-1	Hexachloroethane	ND		120	53.7
96-12-8	1,2-Dibromo-3-chloropropane	ND		300	53.7
120-82-1	1,2,4-Trichlorobenzene	ND		300	53.7
91-20-3	Naphthalene	ND		300	53.7
91-57-6	2-Methylnaphthalene	ND		300	53.7

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-21ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SB1
Total Solids: 81%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		320	52.5
74-87-3	Chloromethane	ND		320	52.5
75-01-4	Vinyl chloride	ND		130	52.5
74-83-9	Bromomethane	ND		320	52.5
75-00-3	Chloroethane	ND		320	52.5
75-69-4	Trichlorofluoromethane	ND		320	52.5
67-64-1	2-Propanone (Acetone)	ND		970	52.5
60-29-7	Diethyl ether	ND		320	52.5
75-35-4	1,1-Dichloroethene	ND		65	52.5
74-88-4	Methyl iodide	ND		130	52.5
107-13-1	Acrylonitrile	ND		320	52.5
75-09-2	Methylene chloride	ND		320	52.5
75-15-0	Carbon disulfide	ND		320	52.5
156-60-5	trans-1,2-Dichloroethene	ND		65	52.5
1634-04-4	Methyltertbutylether (MTBE)	ND		320	52.5
75-34-3	1,1-Dichloroethane	ND		65	52.5
78-93-3	2-Butanone (MEK)	ND		320	52.5
156-59-2	cis-1,2-Dichloroethene	ND		65	52.5
67-66-3	Chloroform	ND		65	52.5
74-97-5	Bromochloromethane	ND		130	52.5
71-55-6	1,1,1-Trichloroethane	ND		65	52.5
107-06-2	1,2-Dichloroethane	ND		65	52.5
71-43-2	Benzene	ND		65	52.5
56-23-5	Carbon tetrachloride	ND		65	52.5
78-87-5	1,2-Dichloropropane	ND		65	52.5
79-01-6	Trichloroethene	ND		65	52.5
74-95-3	Dibromomethane	ND		130	52.5
75-27-4	Bromodichloromethane	ND		130	52.5
591-78-6	2-Hexanone	ND		320	52.5
10061-01-5	cis-1,3-Dichloropropene	ND		65	52.5
10061-02-6	trans-1,3-Dichloropropene	ND		65	52.5
108-88-3	Toluene	ND		65	52.5
79-00-5	1,1,2-Trichloroethane	ND		65	52.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		320	52.5
124-48-1	Dibromochloromethane	ND		130	52.5
106-93-4	1,2-Dibromoethane	ND		65	52.5

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		65	52.5
630-20-6	1,1,1,2-Tetrachloroethane	ND		130	52.5
108-90-7	Chlorobenzene	ND		65	52.5
100-41-4	Ethylbenzene	ND		65	52.5
108383,106423	m & p Xylene	ND		130	52.5
75-25-2	Bromoform	ND		130	52.5
100-42-5	Styrene	ND		65	52.5
95-47-6	o-Xylene	ND		65	52.5
79-34-5	1,1,2,2-Tetrachloroethane	ND		130	52.5
96-18-4	1,2,3-Trichloropropane	ND		130	52.5
110-57-6	trans-1,4-Dichloro-2 butene	ND		130	52.5
98-82-8	Isopropylbenzene	ND		130	52.5
103-65-1	n-Propylbenzene	ND		130	52.5
108-67-8	1,3,5-Trimethylbenzene	ND		130	52.5
95-63-6	1,2,4-Trimethylbenzene	ND		130	52.5
541-73-1	1,3-Dichlorobenzene	ND		130	52.5
106-46-7	1,4-Dichlorobenzene	ND		130	52.5
95-50-1	1,2-Dichlorobenzene	ND		130	52.5
67-72-1	Hexachloroethane	ND		130	52.5
96-12-8	1,2-Dibromo-3-chloropropane	ND		320	52.5
120-82-1	1,2,4-Trichlorobenzene	ND		320	52.5
91-20-3	Naphthalene	ND		320	52.5
91-57-6	2-Methylnaphthalene	ND		320	52.5

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-22ME

Date Collected:	8/24/1999	Test Code.	SME
		Test Name:	Soil-MEOH
Date Analyzed:	8/26/1999 by WORM	Sample ID:	SB2
Total Solids:	87%		

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		310	53.4
74-87-3	Chloromethane	ND		310	53.4
75-01-4	Vinyl chloride	ND		120	53.4
74-83-9	Bromomethane	ND		310	53.4
75-00-3	Chloroethane	ND		310	53.4
75-69-4	Trichlorofluoromethane	ND		310	53.4
67-64-1	2-Propanone (Acetone)	ND		920	53.4
60-29-7	Diethyl ether	ND		310	53 4
75-35-4	1,1-Dichloroethene	ND		61	53.4
74-88-4	Methyl iodide	ND		120	53.4
107-13-1	Acrylonitrile	ND		310	53.4
75-09-2	Methylene chloride	ND		310	53.4
75-15-0	Carbon disulfide	ND		310	53.4
156-60-5	trans-1,2-Dichloroethene	ND		61	53.4
1634-04-4	Methyltertbutylether (MTBE)	ND		310	53.4
75-34-3	1,1-Dichloroethane	ND		61	53.4
78-93-3	2-Butanone (MEK)	ND		310	53.4
156-59-2	cis-1,2-Dichloroethene	ND		61	53.4
67-66-3	Chloroform	ND		61	53.4
74-97-5	Bromochloromethane	ND		120	53.4
71-55-6	1,1,1-Trichloroethane	ND		61	53.4
107-06-2	1,2-Dichloroethane	ND		61	53.4
71-43-2	Benzene	ND		61	53.4
56-23-5	Carbon tetrachloride	ND		61	53.4
78-87-5	1,2-Dichloropropane	ND		61	53.4
79-01-6	Trichloroethene	ND		61	53.4
74-95-3	Dibromomethane	ND		120	53.4
75-27-4	Bromodichloromethane	ND		120	53.4
591-78-6	2-Hexanone	ND		310	53.4
10061-01-5	cis-1,3-Dichloropropene	ND		61	53.4
10061-02-6	trans-1,3-Dichloropropene	ND		61	53.4
108-88-3	Toluene	ND		61	53.4
79-00-5	1,1,2-Trichloroethane	ND		61	53.4
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		310	53.4
124-48-1	Dibromochloromethane	ND		120	53.4
106-93-4	1,2-Dibromoethane	ND		61	53.4

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		61	53.4
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	53.4
108-90-7	Chlorobenzene	ND		61	53.4
100-41-4	Ethylbenzene	ND		61	53.4
108383,106423	m & p Xylene	ND		120	53.4
75-25-2	Bromoform	ND		120	53.4
100-42-5	Styrene	ND		61	53.4
95-47-6	o-Xylene	ND		61	53.4
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	53.4
96-18-4	1,2,3-Trichloropropane	ND		120	53.4
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	53.4
98-82-8	Isopropylbenzene	ND		120	53.4
103-65-1	n-Propylbenzene	ND		120	53.4
108-67-8	1,3,5-Trimethylbenzene	ND		120	53.4
95-63-6	1,2,4-Trimethylbenzene	ND		120	53.4
541-73-1	1,3-Dichlorobenzene	ND		120	53.4
106-46-7	1,4-Dichlorobenzene	ND		120	53.4
95-50-1	1,2-Dichlorobenzene	ND		120	53.4
67-72-1	Hexachloroethane	ND		120	53.4
96-12-8	1,2-Dibromo-3-chloropropane	ND		310	53.4
120-82-1	1,2,4-Trichlorobenzene	ND		310	53.4
91-20-3	Naphthalene	ND		310	53.4
91-57-6	2-Methylnaphthalene	ND		310	53.4

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #. 9908164-23ME

Date Collected: 8/24/1999
Test Code: SME
Test Name. Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SB3
Total Solids: 89%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		290	51.6
74-87-3	Chloromethane	ND		290	51.6
75-01-4	Vinyl chloride	ND		120	51.6
74-83-9	Bromomethane	ND		290	51.6
75-00-3	Chloroethane	ND		290	51.6
75-69-4	Trichlorofluoromethane	ND		290	51.6
67-64-1	2-Propanone (Acetone)	ND		870	51.6
60-29-7	Diethyl ether	ND		290	51.6
75-35-4	1,1-Dichloroethene	ND		58	51.6
74-88-4	Methyl iodide	ND		120	51.6
107-13-1	Acrylonitrile	ND		290	51.6
75-09-2	Methylene chloride	ND		290	51.6
75-15-0	Carbon disulfide	ND		290	51.6
156-60-5	trans-1,2-Dichloroethene	ND		58	51.6
1634-04-4	Methyltertbutylether (MTBE)	ND		290	51.6
75-34-3	1,1-Dichloroethane	ND		58	51.6
78-93-3	2-Butanone (MEK)	ND		290	51.6
156-59-2	cis-1,2-Dichloroethene	ND		58	51.6
67-66-3	Chloroform	ND		58	51.6
74-97-5	Bromochloromethane	ND		120	51.6
71-55-6	1,1,1-Trichloroethane	ND		58	51.6
107-06-2	1,2-Dichloroethane	ND		58	51.6
71-43-2	Benzene	ND		58	51.6
56-23-5	Carbon tetrachloride	ND		58	51.6
78-87-5	1,2-Dichloropropane	ND		58	51.6
79-01-6	Trichloroethene	ND		58	51.6
74-95-3	Dibromomethane	ND		120	51.6
75-27-4	Bromodichloromethane	ND		120	51.6
591-78-6	2-Hexanone	ND		290	51.6
10061-01-5	cis-1,3-Dichloropropene	ND		58	51.6
10061-02-6	trans-1,3-Dichloropropene	ND		58	51.6
108-88-3	Toluene	ND		58	51.6
79-00-5	1,1,2-Trichloroethane	ND		58	51.6
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		290	51.6
124-48-1	Dibromochloromethane	ND		120	51.6
06-93-4	1,2-Dibromoethane	ND		58	51.6

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		58	51.6
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	51.6
108-90-7	Chlorobenzene	ND		58	51.6
100-41-4	Ethylbenzene	ND		58	51.6
108383,106423	m & p Xylene	ND		120	51.6
75-25-2	Bromoform	ND		120	51.6
100-42-5	Styrene	ND		58	51.6
95-47-6	o-Xylene	ND		58	51.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	51.6
96-18-4	1,2,3-Trichloropropane	ND		120	51.6
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	51.6
98-82-8	Isopropylbenzene	ND		120	51.6
103-65-1	n-Propylbenzene	ND		120	51.6
108-67-8	1,3,5-Trimethylbenzene	ND		120	51.6
95-63-6	1,2,4-Trimethylbenzene	ND		120	51.6
541-73-1	1,3-Dichlorobenzene	ND		120	51.6
106-46-7	1,4-Dichlorobenzene	ND		120	51.6
95-50-1	1,2-Dichlorobenzene	ND		120	51.6
67-72-1	Hexachloroethane	ND		120	51.6
96-12-8	1,2-Dibromo-3-chloropropane	ND		290	51.6
120-82-1	1,2,4-Trichlorobenzene	ND		290	51.6
91-20-3	Naphthalene	ND		290	51.6
91-57-6	2-Methylnaphthalene	ND		290	51.6

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-24ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SB4
Total Solids: 85%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		310	53.3
74-87-3	Chloromethane	ND		310	53.3
75-01-4	Vinyl chloride	ND		130	53.3
74-83-9	Bromomethane	ND		310	53.3
75-00-3	Chloroethane	ND		310	53.3
75-69-4	Trichlorofluoromethane	ND		310	53.3
67-64-1	2-Propanone (Acetone)	ND		940	53.3
60-29-7	Diethyl ether	ND		310	53.3
75-35-4	1,1-Dichloroethene	ND		63	53.3
74-88-4	Methyl iodide	ND		130	53.3
107-13-1	Acrylonitrile	ND		310	53.3
75-09-2	Methylene chloride	ND		310	53.3
75-15-0	Carbon disulfide	ND		310	53.3
156-60-5	trans-1,2-Dichloroethene	ND		63	53.3
1634-04-4	Methyltertbutylether (MTBE)	ND		310	53.3
75-34-3	1,1-Dichloroethane	ND		63	53.3
78-93-3	2-Butanone (MEK)	ND		310	53.3
156-59-2	cis-1,2-Dichloroethene	ND		63	53.3
67-66-3	Chloroform	ND		63	53.3
74-97-5	Bromochloromethane	ND		130	53.3
71-55-6	1,1,1-Trichloroethane	ND		63	53.3
107-06-2	1,2-Dichloroethane	ND		63	53.3
71-43-2	Benzene	ND		63	53.3
56-23-5	Carbon tetrachloride	ND		63	53.3
78-87-5	1,2-Dichloropropane	ND		63	53.3
79-01-6	Trichloroethene	ND		63	53.3
74-95-3	Dibromomethane	ND		130	53.3
75-27-4	Bromodichloromethane	ND		130	53.3
591-78-6	2-Hexanone	ND		310	53.3
10061-01-5	cis-1,3-Dichloropropene	ND		63	53.3
10061-02-6	trans-1,3-Dichloropropene	ND		63	53.3
108-88-3	Toluene	ND		63	53.3
79-00-5	1,1,2-Trichloroethane	ND		63	53.3
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		310	53.3
124-48-1	Dibromochloromethane	ND		130	53.3
106-93-4	1,2-Dibromoethane	ND		63	53.3

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		63	53.3
630-20-6	1,1,1,2-Tetrachloroethane	ND		130	53.3
108-90-7	Chlorobenzene	ND		63	53.3
100-41-4	Ethylbenzene	ND		63	53.3
108383,106423	m & p Xylene	ND		130	53.3
75-25-2	Bromoform	ND		130	53.3
100-42-5	Styrene	ND		63	53.3
95-47-6	o-Xylene	ND		63	53.3
79-34-5	1,1,2,2-Tetrachloroethane	ND		130	53.3
96-18-4	1,2,3-Trichloropropane	ND		130	53.3
110-57-6	trans-1,4-Dichloro-2 butene	ND		130	53.3
98-82-8	Isopropylbenzene	ND		130	53.3
103-65-1	n-Propylbenzene	ND		130	53.3
108-67-8	1,3,5-Trimethylbenzene	ND		130	53.3
95-63-6	1,2,4-Trimethylbenzene	ND		130	53.3
541-73-1	1,3-Dichlorobenzene	ND		130	53.3
106-46-7	1,4-Dichlorobenzene	ND		130	53.3
95-50-1	1,2-Dichlorobenzene	ND		130	53.3
67-72-1	Hexachloroethane	ND		130	53.3
96-12-8	1,2-Dibromo-3-chloropropane	ND		310	53.3
120-82-1	1,2,4-Trichlorobenzene	ND		310	53.3
91-20-3	Naphthalene	ND		310	53.3
91-57-6	2-Methylnaphthalene	ND		310	53.3

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-25ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SB5
Total Solids: 88%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		310	54.3
74-87-3	Chloromethane	ND		310	54.3
75-01-4	Vinyl chloride	ND		120	54.3
74-83-9	Bromomethane	ND		310	54.3
75-00-3	Chloroethane	ND		310	54.3
75-69-4	Trichlorofluoromethane	ND		310	54.3
67-64-1	2-Propanone (Acetone)	ND		930	54.3
60-29-7	Diethyl ether	ND		310	54.3
75-35-4	1,1-Dichloroethene	ND		62	54.3
74-88-4	Methyl iodide	ND		120	54.3
107-13-1	Acrylonitrile	ND		310	54.3
75-09-2	Methylene chloride	ND		310	54.3
75-15-0	Carbon disulfide	ND		310	54.3
156-60-5	trans-1,2-Dichloroethene	ND		62	54.3
1634-04-4	Methyltertbutylether (MTBE)	ND		310	54.3
75-34-3	1,1-Dichloroethane	ND		62	54.3
78-93-3	2-Butanone (MEK)	ND		310	54.3
156-59-2	cis-1,2-Dichloroethene	ND		62	54.3
67-66-3	Chloroform	ND		62	54.3
74-97-5	Bromochloromethane	ND		120	54.3
71-55-6	1,1,1-Trichloroethane	ND		62	54.3
107-06-2	1,2-Dichloroethane	ND		62	54.3
71-43-2	Benzene	ND		62	54.3
56-23-5	Carbon tetrachloride	ND		62	54.3
78-87-5	1,2-Dichloropropane	ND		62	54.3
79-01-6	Trichloroethene	ND		62	54.3
74-95-3	Dibromomethane	ND		120	54.3
75-27-4	Bromodichloromethane	ND		120	54.3
591-78-6	2-Hexanone	ND		310	54.3
10061-01-5	cis-1,3-Dichloropropene	ND		62	54.3
10061-02-6	trans-1,3-Dichloropropene	ND		62	54.3
108-88-3	Toluene	ND		62	54.3
79-00-5	1,1,2-Trichloroethane	ND		62	54.3
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		310	54.3
124-48-1	Dibromochloromethane	ND		120	54.3
106-93-4	1,2-Dibromoethane	ND		62	54.3

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		62	54.3
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	54.3
108-90-7	Chlorobenzene	ND		62	54.3
100-41-4	Ethylbenzene	ND		62	54.3
108383,106423	m & p Xylene	ND		120	54.3
75-25-2	Bromoform	ND		120	54.3
100-42-5	Styrene	ND		62	54.3
95-47-6	o-Xylene	ND		62	54.3
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	54.3
96-18-4	1,2,3-Trichloropropane	ND		120	54.3
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	54.3
98-82-8	Isopropylbenzene	ND		120	54.3
103-65-1	n-Propylbenzene	ND		120	54.3
108-67-8	1,3,5-Trimethylbenzene	ND		120	54.3
95-63-6	1,2,4-Trimethylbenzene	ND		120	54.3
541-73-1	1,3-Dichlorobenzene	ND		120	54.3
106-46-7	1,4-Dichlorobenzene	ND		120	54.3
95-50-1	1,2-Dichlorobenzene	ND		120	54.3
67-72-1	Hexachloroethane	ND		120	54.3
96-12-8	1,2-Dibromo-3-chloropropane	ND		310	54.3
120-82-1	1,2,4-Trichlorobenzene	ND		310	54.3
91-20-3	Naphthalene	ND		310	54.3
91-57-6	2-Methylnaphthalene	ND		310	54.3

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-26ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SB6
Total Solids: 87%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		290	50.5
74-87-3	Chloromethane	ND		290	50.5
75-01-4	Vinyl chloride	ND		120	50.5
74-83-9	Bromomethane	ND		290	50.5
75-00-3	Chloroethane	ND		290	50.5
75-69-4	Trichlorofluoromethane	ND		290	50.5
67-64-1	2-Propanone (Acetone)	ND		870	50.5
60-29-7	Diethyl ether	ND		290	50.5
75-35-4	1,1-Dichloroethene	ND		58	50.5
74-88-4	Methyl iodide	ND		120	50.5
107-13-1	Acrylonitrile	ND		290	50.5
75-09-2	Methylene chloride	ND		290	50.5
75-15-0	Carbon disulfide	ND		290	50.5
156-60-5	trans-1,2-Dichloroethene	ND		58	50.5
1634-04-4	Methyltertbutylether (MTBE)	ND		290	50.5
75-34-3	1,1-Dichloroethane	ND		58	50.5
78-93-3	2-Butanone (MEK)	ND		290	50.5
156-59-2	cis-1,2-Dichloroethene	ND		58	50.5
67-66-3	Chloroform	ND		58	50.5
74-97-5	Bromochloromethane	ND		120	50.5
71-55-6	1,1,1-Trichloroethane	ND		58	50.5
107-06-2	1,2-Dichloroethane	ND		58	50.5
71-43-2	Benzene	ND		58	50.5
56-23-5	Carbon tetrachloride	ND		58	50.5
78-87-5	1,2-Dichloropropane	ND		58	50.5
79-01-6	Trichloroethene	ND		58	50.5
74-95-3	Dibromomethane	ND		120	50.5
75-27-4	Bromodichloromethane	ND		120	50.5
591-78-6	2-Hexanone	ND		290	50.5
10061-01-5	cis-1,3-Dichloropropene	ND		58	50.5
10061-02-6	trans-1,3-Dichloropropene	ND		58	50.5
108-88-3	Toluene	ND		58	50.5
79-00-5	1,1,2-Trichloroethane	ND		58	50.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		290	50.5
124-48-1	Dibromochloromethane	ND		120	50.5
106-93-4	1,2-Dibromoethane	ND		58	50.5

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		58	50.5
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	50.5
108-90-7	Chlorobenzene	ND		58	50.5
100-41-4	Ethylbenzene	ND		58	50.5
108383,106423	m & p Xylene	ND		120	50.5
75-25-2	Bromoform	ND		120	50.5
100-42-5	Styrene	ND		58	50.5
95-47-6	o-Xylene	ND		58	50.5
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	50.5
96-18-4	1,2,3-Trichloropropane	ND		120	50.5
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	50.5
98-82-8	Isopropylbenzene	ND		120	50.5
103-65-1	n-Propylbenzene	ND		120	50.5
108-67-8	1,3,5-Trimethylbenzene	ND		120	50.5
95-63-6	1,2,4-Trimethylbenzene	ND		120	50.5
541-73-1	1,3-Dichlorobenzene	ND		120	50.5
106-46-7	1,4-Dichlorobenzene	ND		120	50.5
95-50-1	1,2-Dichlorobenzene	ND		120	50.5
67-72-1	Hexachloroethane	ND		120	50.5
96-12-8	1,2-Dibromo-3-chloropropane	ND		290	50.5
120-82-1	1,2,4-Trichlorobenzene	ND		290	50.5
91-20-3	Naphthalene	ND		290	50.5
91-57-6	2-Methylnaphthalene	ND		290	50.5

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-27ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SB7
Total Solids: 86%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		310	53.2
74-87-3	Chloromethane	ND		310	53.2
75-01-4	Vinyl chloride	ND		120	53.2
74-83-9	Bromomethane	ND		310	53.2
75-00-3	Chloroethane	ND		310	53.2
75-69-4	Trichlorofluoromethane	ND		310	53.2
67-64-1	2-Propanone (Acetone)	ND		930	53.2
60-29-7	Diethyl ether	ND		310	53.2
75-35-4	1,1-Dichloroethene	ND		62	53.2
74-88-4	Methyl iodide	ND		120	53.2
107-13-1	Acrylonitrile	ND		310	53.2
75-09-2	Methylene chloride	ND		310	53.2
75-15-0	Carbon disulfide	ND		310	53.2
156-60-5	trans-1,2-Dichloroethene	ND		62	53.2
1634-04-4	Methyltertbutylether (MTBE)	ND		310	53.2
75-34-3	1,1-Dichloroethane	ND		62	53.2
78-93-3	2-Butanone (MEK)	ND		310	53.2
156-59-2	cis-1,2-Dichloroethene	ND		62	53.2
67-66-3	Chloroform	ND		62	53.2
74-97-5	Bromochloromethane	ND		120	53.2
71-55-6	1,1,1-Trichloroethane	ND		62	53.2
107-06-2	1,2-Dichloroethane	ND		62	53.2
71-43-2	Benzene	ND		62	53.2
56-23-5	Carbon tetrachloride	ND		62	53.2
78-87-5	1,2-Dichloropropane	ND		62	53.2
79-01-6	Trichloroethene	ND		62	53.2
74-95-3	Dibromomethane	ND		120	53.2
75-27-4	Bromodichloromethane	ND		120	53.2
591-78-6	2-Hexanone	ND		310	53.2
10061-01-5	cis-1,3-Dichloropropene	ND		62	53.2
10061-02-6	trans-1,3-Dichloropropene	ND		62	53.2
108-88-3	Toluene	ND		62	53.2
79-00-5	1,1,2-Trichloroethane	ND		62	53.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		310	53.2
124-48-1	Dibromochloromethane	ND		120	53.2
106-93-4	1,2-Dibromoethane	ND		62	53.2

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		62	53.2
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	53.2
108-90-7	Chlorobenzene	ND		62	53.2
100-41-4	Ethylbenzene	ND		62	53.2
108383,106423	m & p Xylene	ND		120	53.2
75-25-2	Bromoform	ND		120	53.2
100-42-5	Styrene	ND		62	53.2
95-47-6	o-Xylene	ND		62	53.2
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	53.2
96-18-4	1,2,3-Trichloropropane	ND		120	53.2
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	53.2
98-82-8	Isopropylbenzene	ND		120	53.2
103-65-1	n-Propylbenzene	ND		120	53.2
108-67-8	1,3,5-Trimethylbenzene	ND		120	53.2
95-63-6	1,2,4-Trimethylbenzene	ND		120	53.2
541-73-1	1,3-Dichlorobenzene	ND		120	53.2
106-46-7	1,4-Dichlorobenzene	ND		120	53.2
95-50-1	1,2-Dichlorobenzene	ND		120	53 2
67-72-1	Hexachloroethane	ND		120	53.2
96-12-8	1,2-Dibromo-3-chloropropane	ND		310	53.2
120-82-1	1,2,4-Trichlorobenzene	ND		310	53.2
91-20-3	Naphthalene	ND		310	53.2
91-57-6	2-Methylnaphthalene	ND		310	53.2

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-28ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SB8
Total Solids: 90%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		290	51.5
74-87-3	Chloromethane	ND		290	51.5
75-01-4	Vinyl chloride	ND		110	51.5
74-83-9	Bromomethane	ND		290	51.5
75-00-3	Chloroethane	ND		290	51.5
75-69-4	Trichlorofluoromethane	ND		290	51.5
67-64-1	2-Propanone (Acetone)	ND		860	51.5
60-29-7	Diethyl ether	ND		290	51.5
75-35-4	1,1-Dichloroethene	ND		57	51.5
74-88-4	Methyl iodide	ND		110	51.5
107-13-1	Acrylonitrile	ND		290	51.5
75-09-2	Methylene chloride	ND		290	51.5
75-15-0	Carbon disulfide	ND		290	51.5
156-60-5	trans-1,2-Dichloroethene	ND		57	51.5
1634-04-4	Methyltertbutylether (MTBE)	ND		290	51.5
75-34-3	1,1-Dichloroethane	ND		57	51.5
78-93-3	2-Butanone (MEK)	ND		290	51.5
156-59-2	cis-1,2-Dichloroethene	ND		57	51.5
67-66-3	Chloroform	ND		57	51.5
74-97-5	Bromochloromethane	ND		110	51.5
71-55-6	1,1,1-Trichloroethane	ND		57	51.5
107-06-2	1,2-Dichloroethane	ND		57	51.5
71-43-2	Benzene	ND		57	51.5
56-23-5	Carbon tetrachloride	ND		57	51.5
78-87-5	1,2-Dichloropropane	ND		57	51.5
79-01-6	Trichloroethene	ND		57	51.5
74-95-3	Dibromomethane	ND		110	51.5
75-27-4	Bromodichloromethane	ND		110	51.5
591-78-6	2-Hexanone	ND		290	51.5
10061-01-5	cis-1,3-Dichloropropene	ND		57	51.5
10061-02-6	trans-1,3-Dichloropropene	ND		57	51.5
108-88-3	Toluene	ND		57	51.5
79-00-5	1,1,2-Trichloroethane	ND		57	51.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		290	51.5
124-48-1	Dibromochloromethane	ND		110	51.5
106-93-4	1,2-Dibromoethane	ND		57	51.5

MDEQ ENVIRONMENTAL LABORATORY
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CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		57	51.5
630-20-6	1,1,1,2-Tetrachloroethane	ND		110	51.5
108-90-7	Chlorobenzene	ND		57	51.5
100-41-4	Ethylbenzene	ND		57	51.5
108383,106423	m & p Xylene	ND		110	51.5
75-25-2	Bromoform	ND		110	51.5
100-42-5	Styrene	ND		57	51.5
95-47-6	o-Xylene	ND		57	51.5
79-34-5	1,1,2,2-Tetrachloroethane	ND		110	51.5
96-18-4	1,2,3-Trichloropropane	ND		110	51.5
110-57-6	trans-1,4-Dichloro-2 butene	ND		110	51.5
98-82-8	Isopropylbenzene	ND		110	51.5
103-65-1	n-Propylbenzene	ND		110	51.5
108-67-8	1,3,5-Trimethylbenzene	ND		110	51.5
95-63-6	1,2,4-Trimethylbenzene	ND		110	51.5
541-73-1	1,3-Dichlorobenzene	ND		110	51.5
106-46-7	1,4-Dichlorobenzene	ND		110	51.5
95-50-1	1,2-Dichlorobenzene	ND		110	51.5
67-72-1	Hexachloroethane	ND		110	51.5
96-12-8	1,2-Dibromo-3-chloropropane	ND		290	51.5
120-82-1	1,2,4-Trichlorobenzene	ND		290	51.5
91-20-3	Naphthalene	ND		290	51.5
91-57-6	2-Methylnaphthalene	ND		290	51.5

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-29ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SB9
Total Solids: 88%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		290	50.7
74-87-3	Chloromethane	ND		290	50.7
75-01-4	Vinyl chloride	ND		120	50.7
74-83-9	Bromomethane	ND		290	50.7
75-00-3	Chloroethane	ND		290	50.7
75-69-4	Trichlorofluoromethane	ND		290	50.7
67-64-1	2-Propanone (Acetone)	ND		860	50.7
60-29-7	Diethyl ether	ND		290	50.7
75-35-4	1,1-Dichloroethene	ND		58	50.7
74-88-4	Methyl iodide	ND		120	50.7
107-13-1	Acrylonitrile	ND		290	50.7
75-09-2	Methylene chloride	ND		290	50.7
75-15-0	Carbon disulfide	ND		290	50.7
156-60-5	trans-1,2-Dichloroethene	ND		58	50.7
1634-04-4	Methyltertbutylether (MTBE)	ND		290	50.7
75-34-3	1,1-Dichloroethane	ND		58	50.7
78-93-3	2-Butanone (MEK)	ND		290	50.7
156-59-2	cis-1,2-Dichloroethene	ND		58	50.7
67-66-3	Chloroform	ND		58	50.7
74-97-5	Bromochloromethane	ND		120	50.7
71-55-6	1,1,1-Trichloroethane	ND		58	50.7
107-06-2	1,2-Dichloroethane	ND		58	50.7
71-43-2	Benzene	ND		58	50.7
56-23-5	Carbon tetrachloride	ND		58	50.7
78-87-5	1,2-Dichloropropane	ND		58	50.7
79-01-6	Trichloroethene	ND		58	50.7
74-95-3	Dibromomethane	ND		120	50.7
75-27-4	Bromodichloromethane	ND		120	50.7
591-78-6	2-Hexanone	ND		290	50.7
10061-01-5	cis-1,3-Dichloropropene	ND		58	50.7
10061-02-6	trans-1,3-Dichloropropene	ND		58	50.7
108-88-3	Toluene	ND		58	50.7
79-00-5	1,1,2-Trichloroethane	ND		58	50.7
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		290	50.7
124-48-1	Dibromochloromethane	ND		120	50.7
106-93-4	1,2-Dibromoethane	ND		58	50.7

MDEQ ENVIRONMENTAL LABORATORY
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CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		58	50.7
630-20-6	1,1,1,2-Tetrachloroethane	ND		120	50.7
108-90-7	Chlorobenzene	ND		58	50.7
100-41-4	Ethylbenzene	ND		58	50.7
108383,106423	m & p Xylene	ND		120	50.7
75-25-2	Bromoform	ND		120	50.7
100-42-5	Styrene	ND		58	50.7
95-47-6	o-Xylene	ND		58	50.7
79-34-5	1,1,2,2-Tetrachloroethane	ND		120	50.7
96-18-4	1,2,3-Trichloropropane	ND		120	50.7
110-57-6	trans-1,4-Dichloro-2 butene	ND		120	50.7
98-82-8	Isopropylbenzene	ND		120	50.7
103-65-1	n-Propylbenzene	ND		120	50.7
108-67-8	1,3,5-Trimethylbenzene	ND		120	50.7
95-63-6	1,2,4-Trimethylbenzene	ND		120	50.7
541-73-1	1,3-Dichlorobenzene	ND		120	50.7
106-46-7	1,4-Dichlorobenzene	ND		120	50.7
95-50-1	1,2-Dichlorobenzene	ND		120	50.7
67-72-1	Hexachloroethane	ND		120	50.7
96-12-8	1,2-Dibromo-3-chloropropane	ND		290	50.7
120-82-1	1,2,4-Trichlorobenzene	ND		290	50.7
91-20-3	Naphthalene	ND		290	50.7
91-57-6	2-Methylnaphthalene	ND		290	50.7

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-30ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SB10
Total Solids: 93%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		280	53.0
74-87-3	Chloromethane	ND		280	53.0
75-01-4	Vinyl chloride	ND		110	53.0
74-83-9	Bromomethane	ND		280	53.0
75-00-3	Chloroethane	ND		280	53.0
75-69-4	Trichlorofluoromethane	ND		280	53.0
67-64-1	2-Propanone (Acetone)	ND		850	53.0
60-29-7	Diethyl ether	ND		280	53.0
75-35-4	1,1-Dichloroethene	ND		57	53.0
74-88-4	Methyl iodide	ND		110	53.0
107-13-1	Acrylonitrile	ND		280	53.0
75-09-2	Methylene chloride	ND		280	53.0
75-15-0	Carbon disulfide	ND		280	53.0
156-60-5	trans-1,2-Dichloroethene	ND		57	53.0
1634-04-4	Methyltertbutylether (MTBE)	ND		280	53.0
75-34-3	1,1-Dichloroethane	ND		57	53.0
78-93-3	2-Butanone (MEK)	ND		280	53.0
156-59-2	cis-1,2-Dichloroethene	ND		57	53.0
67-66-3	Chloroform	ND		57	53.0
74-97-5	Bromochloromethane	ND		110	53.0
71-55-6	1,1,1-Trichloroethane	ND		57	53.0
107-06-2	1,2-Dichloroethane	ND		57	53.0
71-43-2	Benzene	ND		57	53.0
56-23-5	Carbon tetrachloride	ND		57	53.0
78-87-5	1,2-Dichloropropane	ND		57	53.0
79-01-6	Trichloroethene	ND		57	53.0
74-95-3	Dibromomethane	ND		110	53.0
75-27-4	Bromodichloromethane	ND		110	53.0
591-78-6	2-Hexanone	ND		280	53.0
10061-01-5	cis-1,3-Dichloropropene	ND		57	53.0
10061-02-6	trans-1,3-Dichloropropene	ND		57	53.0
108-88-3	Toluene	ND		57	53.0
79-00-5	1,1,2-Trichloroethane	ND		57	53.0
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		280	53.0
124-48-1	Dibromochloromethane	ND		110	53.0
106-93-4	1,2-Dibromoethane	ND		57	53.0

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	140		57	53.0
630-20-6	1,1,1,2-Tetrachloroethane	ND		110	53.0
108-90-7	Chlorobenzene	ND		57	53.0
100-41-4	Ethylbenzene	ND		57	53.0
108383,106423	m & p Xylene	ND		110	53.0
75-25-2	Bromoform	ND		110	53.0
100-42-5	Styrene	ND		57	53.0
95-47-6	o-Xylene	ND		57	53.0
79-34-5	1,1,2,2-Tetrachloroethane	ND		110	53.0
96-18-4	1,2,3-Trichloropropane	ND		110	53.0
110-57-6	trans-1,4-Dichloro-2 butene	ND		110	53.0
98-82-8	Isopropylbenzene	ND		110	53.0
103-65-1	n-Propylbenzene	ND		110	53.0
108-67-8	1,3,5-Trimethylbenzene	ND		110	53.0
95-63-6	1,2,4-Trimethylbenzene	ND		110	53.0
541-73-1	1,3-Dichlorobenzene	ND		110	53.0
106-46-7	1,4-Dichlorobenzene	ND		110	53.0
95-50-1	1,2-Dichlorobenzene	ND		110	53.0
67-72-1	Hexachloroethane	ND		110	53.0
96-12-8	1,2-Dibromo-3-chloropropane	ND		280	53.0
120-82-1	1,2,4-Trichlorobenzene	ND		280	53.0
91-20-3	Naphthalene	ND		280	53.0
91-57-6	2-Methylnaphthalene	ND		280	53.0

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-31ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SD1
Total Solids: 77%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		340	52.5
74-87-3	Chloromethane	ND		340	52.5
75-01-4	Vinyl chloride	ND		140	52.5
74-83-9	Bromomethane	ND		340	52.5
75-00-3	Chloroethane	ND		340	52.5
75-69-4	Trichlorofluoromethane	ND		340	52.5
67-64-1	2-Propanone (Acetone)	ND		1000	52.5
60-29-7	Diethyl ether	ND		340	52.5
75-35-4	1,1-Dichloroethene	ND		68	52.5
74-88-4	Methyl iodide	ND		140	52.5
107-13-1	Acrylonitrile	ND		340	52 5
75-09-2	Methylene chloride	ND		340	52.5
75-15-0	Carbon disulfide	ND		340	52.5
156-60-5	trans-1,2-Dichloroethene	ND		68	52.5
1634-04-4	Methyltertbutylether (MTBE)	ND		340	52 5
75-34-3	1,1-Dichloroethane	ND		68	52.5
78-93-3	2-Butanone (MEK)	ND		340	52.5
156-59-2	cis-1,2-Dichloroethene	ND		68	52.5
67-66-3	Chloroform	ND		68	52.5
74-97-5	Bromochloromethane	ND		140	52.5
71-55-6	1,1,1-Trichloroethane	ND		68	52.5
107-06-2	1,2-Dichloroethane	ND		68	52.5
71-43-2	Benzene	ND		68	52.5
56-23-5	Carbon tetrachloride	ND		68	52.5
78-87-5	1,2-Dichloropropane	ND		68	52.5
79-01-6	Trichloroethene	ND		68	52.5
74-95-3	Dibromomethane	ND		140	52.5
75-27-4	Bromodichloromethane	ND		140	52.5
591-78-6	2-Hexanone	ND		340	52.5
10061-01-5	cis-1,3-Dichloropropene	ND		68	52.5
10061-02-6	trans-1,3-Dichloropropene	ND		68	52.5
108-88-3	Toluene	ND		68	52.5
79-00-5	1,1,2-Trichloroethane	ND		68	52.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		340	52 5
124-48-1	Dibromochloromethane	ND		140	52.5
106-93-4	1,2-Dibromoethane	ND		68	52.5

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		68	52.5
630-20-6	1,1,1,2-Tetrachloroethane	ND		140	52.5
108-90-7	Chlorobenzene	ND		68	52.5
100-41-4	Ethylbenzene	ND		68	52.5
108383,106423	m & p Xylene	ND		140	52.5
75-25-2	Bromoform	ND		140	52.5
100-42-5	Styrene	ND		68	52.5
95-47-6	o-Xylene	ND		68	52.5
79-34-5	1,1,2,2-Tetrachloroethane	ND		140	52.5
96-18-4	1,2,3-Trichloropropane	ND		140	52.5
110-57-6	trans-1,4-Dichloro-2 butene	ND		140	52.5
98-82-8	Isopropylbenzene	ND		140	52.5
103-65-1	n-Propylbenzene	ND		140	52.5
108-67-8	1,3,5-Trimethylbenzene	ND		140	52.5
95-63-6	1,2,4-Trimethylbenzene	ND		140	52.5
541-73-1	1,3-Dichlorobenzene	ND		140	52.5
106-46-7	1,4-Dichlorobenzene	ND		140	52.5
95-50-1	1,2-Dichlorobenzene	ND		140	52.5
67-72-1	Hexachloroethane	ND		140	52.5
96-12-8	1,2-Dibromo-3-chloropropane	ND		340	52.5
120-82-1	1,2,4-Trichlorobenzene	ND		340	52.5
91-20-3	Naphthalene	ND		340	52.5
91-57-6	2-Methylnaphthalene	ND		340	52.5

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-32ME

Date Collected. 8/24/1999

Test Code: SME
Test Name: Soil-MEOH

Date Analyzed: 8/26/1999 by WORM

Sample ID: SD2

Total Solids: 75%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		330	49.9
74-87-3	Chloromethane	ND		330	49.9
75-01-4	Vinyl chloride	ND		130	49.9
74-83-9	Bromomethane	ND		330	49.9
75-00-3	Chloroethane	ND		330	49.9
75-69-4	Trichlorofluoromethane	ND		330	49.9
67-64-1	2-Propanone (Acetone)	ND		1000	49.9
60-29-7	Diethyl ether	ND		330	49.9
75-35-4	1,1-Dichloroethene	ND		67	49.9
74-88-4	Methyl iodide	ND		130	49.9
107-13-1	Acrylonitrile	ND		330	49.9
75-09-2	Methylene chloride	ND		330	49.9
75-15-0	Carbon disulfide	ND		330	49.9
156-60-5	trans-1,2-Dichloroethene	ND		67	49.9
1634-04-4	Methyltertbutylether (MTBE)	ND		330	49.9
75-34-3	1,1-Dichloroethane	ND		67	49.9
78-93-3	2-Butanone (MEK)	ND		330	49.9
156-59-2	cis-1,2-Dichloroethene	ND		67	49.9
67-66-3	Chloroform	ND		67	49.9
74-97-5	Bromochloromethane	ND		130	49.9
71-55-6	1,1,1-Trichloroethane	ND		67	49.9
107-06-2	1,2-Dichloroethane	ND		67	49.9
71-43-2	Benzene	ND		67	49.9
56-23-5	Carbon tetrachloride	ND		67	49.9
78-87-5	1,2-Dichloropropane	ND		67	49.9
79-01-6	Trichloroethene	ND		67	49.9
74-95-3	Dibromomethane	ND		130	49.9
75-27-4	Bromodichloromethane	ND		130	49.9
591-78-6	2-Hexanone	ND		330	49.9
10061-01-5	cis-1,3-Dichloropropene	ND		67	49.9
10061-02-6	trans-1,3-Dichloropropene	ND		67	49.9
108-88-3	Toluene	ND		67	49.9
79-00-5	1,1,2-Trichloroethane	ND		67	49.9
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		330	49.9
124-48-1	Dibromochloromethane	ND		130	49.9
106-93-4	1,2-Dibromoethane	ND		67	49.9

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		67	49.9
630-20-6	1,1,1,2-Tetrachloroethane	ND		130	49.9
108-90-7	Chlorobenzene	ND		67	49.9
100-41-4	Ethylbenzene	ND		67	49.9
108383,106423	m & p Xylene	ND		130	49.9
75-25-2	Bromoform	ND		130	49.9
100-42-5	Styrene	ND		67	49.9
95-47-6	o-Xylene	ND		67	49.9
79-34-5	1,1,2,2-Tetrachloroethane	ND		130	49.9
96-18-4	1,2,3-Trichloropropane	ND		130	49.9
110-57-6	trans-1,4-Dichloro-2 butene	ND		130	49.9
98-82-8	Isopropylbenzene	ND		130	49.9
103-65-1	n-Propylbenzene	ND		130	49.9
108-67-8	1,3,5-Trimethylbenzene	ND		130	49.9
95-63-6	1,2,4-Trimethylbenzene	ND		130	49.9
541-73-1	1,3-Dichlorobenzene	ND		130	49.9
106-46-7	1,4-Dichlorobenzene	ND		130	49.9
95-50-1	1,2-Dichlorobenzene	ND		130	49.9
67-72-1	Hexachloroethane	ND		130	49.9
96-12-8	1,2-Dibromo-3-chloropropane	ND		330	49.9
120-82-1	1,2,4-Trichlorobenzene	ND		330	49.9
91-20-3	Naphthalene	ND		330	49.9
91-57-6	2-Methylnaphthalene	ND		330	49.9

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-33ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SD3
Total Solids: 68%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		390	53.5
74-87-3	Chloromethane	ND		390	53.5
75-01-4	Vinyl chloride	ND		160	53.5
74-83-9	Bromomethane	ND		390	53.5
75-00-3	Chloroethane	ND		390	53.5
75-69-4	Trichlorofluoromethane	ND		390	53.5
67-64-1	2-Propanone (Acetone)	ND		1200	53.5
60-29-7	Diethyl ether	ND		390	53.5
75-35-4	1,1-Dichloroethene	ND		79	53.5
74-88-4	Methyl iodide	ND		160	53.5
107-13-1	Acrylonitrile	ND		390	53.5
75-09-2	Methylene chloride	ND		390	53.5
75-15-0	Carbon disulfide	ND		390	53.5
156-60-5	trans-1,2-Dichloroethene	ND		79	53.5
1634-04-4	Methyltertbutylether (MTBE)	ND		390	53.5
75-34-3	1,1-Dichloroethane	ND		79	53.5
78-93-3	2-Butanone (MEK)	ND		390	53.5
156-59-2	cis-1,2-Dichloroethene	ND		79	53.5
67-66-3	Chloroform	ND		79	53.5
74-97-5	Bromochloromethane	ND		160	53.5
71-55-6	1,1,1-Trichloroethane	ND		79	53.5
107-06-2	1,2-Dichloroethane	ND		79	53.5
71-43-2	Benzene	ND		79	53.5
56-23-5	Carbon tetrachloride	ND		79	53.5
78-87-5	1,2-Dichloropropane	ND		79	53.5
79-01-6	Trichloroethene	ND		79	53.5
74-95-3	Dibromomethane	ND		160	53.5
75-27-4	Bromodichloromethane	ND		160	53.5
591-78-6	2-Hexanone	ND		390	53.5
10061-01-5	cis-1,3-Dichloropropene	ND		79	53.5
10061-02-6	trans-1,3-Dichloropropene	ND		79	53.5
108-88-3	Toluene	ND		79	53.5
79-00-5	1,1,2-Trichloroethane	ND		79	53.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		390	53.5
124-48-1	Dibromochloromethane	ND		160	53.5
106-93-4	1,2-Dibromoethane	ND		79	53.5

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		79	53.5
630-20-6	1,1,1,2-Tetrachloroethane	ND		160	53.5
108-90-7	Chlorobenzene	ND		79	53.5
100-41-4	Ethylbenzene	ND		79	53.5
108383,106423	m & p Xylene	ND		160	53.5
75-25-2	Bromoform	ND		160	53.5
100-42-5	Styrene	ND		79	53.5
95-47-6	o-Xylene	ND		79	53.5
79-34-5	1,1,2,2-Tetrachloroethane	ND		160	53.5
96-18-4	1,2,3-Trichloropropane	ND		160	53.5
110-57-6	trans-1,4-Dichloro-2 butene	ND		160	53.5
98-82-8	Isopropylbenzene	ND		160	53.5
103-65-1	n-Propylbenzene	ND		160	53.5
108-67-8	1,3,5-Trimethylbenzene	ND		160	53.5
95-63-6	1,2,4-Trimethylbenzene	ND		160	53.5
541-73-1	1,3-Dichlorobenzene	ND		160	53.5
106-46-7	1,4-Dichlorobenzene	ND		160	53.5
95-50-1	1,2-Dichlorobenzene	ND		160	53.5
67-72-1	Hexachloroethane	ND		160	53.5
96-12-8	1,2-Dibromo-3-chloropropane	ND		390	53.5
120-82-1	1,2,4-Trichlorobenzene	ND		390	53.5
91-20-3	Naphthalene	ND		390	53.5
91-57-6	2-Methylnaphthalene	ND		390	53.5

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Work Order #: 9908164-34ME

Date Collected: 8/24/1999
Test Code: SME
Test Name: Soil-MEOH
Date Analyzed: 8/26/1999 by WORM
Sample ID: SD4
Total Solids: 40%

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
75-71-8	Dichlorodifluoromethane	ND		610	49.1
74-87-3	Chloromethane	ND		610	49.1
75-01-4	Vinyl chloride	ND		250	49.1
74-83-9	Bromomethane	ND		610	49.1
75-00-3	Chloroethane	ND		610	49.1
75-69-4	Trichlorofluoromethane	ND		610	49.1
67-64-1	2-Propanone (Acetone)	ND		1800	49.1
60-29-7	Diethyl ether	ND		610	49.1
75-35-4	1,1-Dichloroethene	ND		120	49.1
74-88-4	Methyl iodide	ND		250	49.1
107-13-1	Acrylonitrile	ND		610	49.1
75-09-2	Methylene chloride	ND		610	49.1
75-15-0	Carbon disulfide	ND		610	49.1
156-60-5	trans-1,2-Dichloroethene	ND		120	49.1
1634-04-4	Methyltertbutylether (MTBE)	ND		610	49.1
75-34-3	1,1-Dichloroethane	ND		120	49.1
78-93-3	2-Butanone (MEK)	ND		610	49.1
156-59-2	cis-1,2-Dichloroethene	ND		120	49.1
67-66-3	Chloroform	ND		120	49.1
74-97-5	Bromochloromethane	ND		250	49.1
71-55-6	1,1,1-Trichloroethane	ND		120	49.1
107-06-2	1,2-Dichloroethane	ND		120	49.1
71-43-2	Benzene	ND		120	49.1
56-23-5	Carbon tetrachloride	ND		120	49.1
78-87-5	1,2-Dichloropropane	ND		120	49.1
79-01-6	Trichloroethene	ND		120	49.1
74-95-3	Dibromomethane	ND		250	49.1
75-27-4	Bromodichloromethane	ND		250	49.1
591-78-6	2-Hexanone	ND		610	49.1
10061-01-5	cis-1,3-Dichloropropene	ND		120	49.1
10061-02-6	trans-1,3-Dichloropropene	ND		120	49.1
108-88-3	Toluene	ND		120	49.1
79-00-5	1,1,2-Trichloroethane	ND		120	49.1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		610	49.1
124-48-1	Dibromochloromethane	ND		250	49.1
106-93-4	1,2-Dibromoethane	ND		120	49.1

MDEQ ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

CAS #	COMPOUND	RESULTS ug/Kg (dry)	REMARK	REPORTED DETECTION LIMIT	DILUTION FACTOR
127-18-4	Tetrachloroethene	ND		120	49.1
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	49.1
108-90-7	Chlorobenzene	ND		120	49.1
100-41-4	Ethylbenzene	ND		120	49.1
108383,106423	m & p Xylene	ND		250	49.1
75-25-2	Bromoform	ND		250	49.1
100-42-5	Styrene	ND		120	49.1
95-47-6	o-Xylene	ND		120	49.1
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	49.1
96-18-4	1,2,3-Trichloropropane	ND		250	49.1
110-57-6	trans-1,4-Dichloro-2 butene	ND		250	49.1
98-82-8	Isopropylbenzene	ND		250	49.1
103-65-1	n-Propylbenzene	ND		250	49.1
108-67-8	1,3,5-Trimethylbenzene	ND		250	49.1
95-63-6	1,2,4-Trimethylbenzene	ND		250	49.1
541-73-1	1,3-Dichlorobenzene	ND		250	49.1
106-46-7	1,4-Dichlorobenzene	ND		250	49.1
95-50-1	1,2-Dichlorobenzene	ND		250	49.1
67-72-1	Hexachloroethane	ND		250	49.1
96-12-8	1,2-Dibromo-3-chloropropane	ND		610	49.1
120-82-1	1,2,4-Trichlorobenzene	ND		610	49.1
91-20-3	Naphthalene	ND		610	49.1
91-57-6	2-Methylnaphthalene	ND		610	49.1

ND = not detected at the specified detection limit.
NM = not measured.
Reference method is 8260.

J Code all results. Low Surrogate Recovery.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY	ENVIRONMENTAL LABORATORY PROCEDURE	NO: PD-13 DATE Rev 10/9/95

Subject: ***Laboratory Result Remark Codes***

A	value reported is the mean of two or more determinations
C	value calculated from other independent parameters.
J	estimated value or value not accurate.
K	actual value is known to be less than the value given, i e substance, if present, is below detection limit.
L	actual value is known to be greater than the value given.
T	value reported is less than criteria of detection.
W	value observed is less than lowest value reportable under "T" code.
DL	sample analyzed using a dilution(s).
DM	dilution required due to matrix problems
HT	recommended laboratory holding time was exceeded before analysis.
LH	Q. C. indicated possible low recovery. Actual level may be higher.
LL	Q. C. indicated possible high recovery. Actual level may be lower.
MM	analytical method or matrix is not within SOP of this laboratory
NC	no confirmation by a second technique
NH	non-homogeneous sample made analysis of a representative sample questionable.
PI	possible interference may have affected the accuracy of the laboratory result.
QC	quality control problems exists.
RB	Reagent Blank. The level of reagent blank contamination is reported in the comment column and may be subtracted from the analyte value by the user.
ST	recommended sample collection/preservation technique not used
ACC	laboratory accident resulted in no obtainable value
FCN	free cyanide was not analyzed due to low level of total cyanide.
INT	interference encountered during analysis resulted in no obtainable value
IST	Improper sample collection/preservation Sample not suitable for analysis.
NAV	requested analysis not available
QNS	quantity not sufficient to perform requested analysis
STR	settleable residue was not analyzed due to low suspended solids.

Approved by _____ 10/17/95
George Su, Lab Section Chief Date

DEQ

bha File R \Worddocs\
Codes doc

MICHIGAN DEPT. OF ENVIRONMENTAL QUALITY
LABORATORY ANALYSIS REQUEST SHEET

**** SAFETY WARNING ****
YES / NO - INFO ON BACK

MATRIX = SEDIMENT / SOIL

LAB ORDER # 99-08-164 PRIORITY II RECEIVED AT LAB BY DA DATE TIME 8/25/99 930 AM PM

SUBMITTER DIVISION ERD DISTRICT OR OFFICE Lansing CONTACT PERSON FOR QUESTIONS Sunny Krajcovic PHONE 517 241-8857

LOCATION SAMPLED Plymouth / Haggerty Rd COLLECTED BY Sunny Krajcovic DELIVERED BY S. Krajcovic

ACCEPT "HT" CODE YES / NO SEND RESULTS TO ATTENTION OF Sunny Krajcovic AT ADDRESS (if different than above office)

INDEX 46538 PCA 31351 PROJECT 455176 PH 02

SAMPLE REMARKS.

SAMPLE NO	FIELD ID OR DESCRIPTION	SAMPLE COLLECTED YY/MM/DD	HH.MM	SAMPLE INFORMATION
01	SS1	99/08/24	11:00	
02	SS2	99/08/24	11:05	
03	SS3	99/08/24	11:10	
04	SS4	99/08/24	11:15	
05	SS5	99/08/24	12:10	
06	SS6	99/08/24	12:25	
07	SS7	99/08/24	12:35	
08	SS8	99/08/24	15:45	

GENERAL CHEMISTRY

GS

COD	1 2 3 4 5 6 7 8
KJEL N. Tot P	1 2 3 4 5 6 7 8
Phenolics	1 2 3 4 5 6 7 8
Total CN	1 2 3 4 5 6 7 8
% Total Solids	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8

ORGANIC

POV VOLATILES

8260 (Sc 1,2)	1 2 3 4 5 6 7 8
BTEX (only)	1 2 3 4 5 6 7 8
8260 plus	1 2 3 4 5 6 7 8

OS PEST & PCB

8081/8121, (Sc 3)	1 2 3 4 5 6 7 8
PCB (only)	1 2 3 4 5 6 7 8
8270 (BN)	1 2 3 4 5 6 7 8

SPECIAL REQUESTS

Lib Search (Qualitative)	
Volatiles	1 2 3 4 5 6 7 8
Base Neutral	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8

INORGANIC

MS

Ca Mg Na K	1 2 3 4 5 6 7 8
Cd Cr Cu Ni Pb Zn	1 2 3 4 5 6 7 8
Fe Co Li Mn	1 2 3 4 5 6 7 8
Al Ba Be Mo Ti V	1 2 3 4 5 6 7 8
Hg - Mercury	1 2 3 4 5 6 7 8
As - Arsenic	1 2 3 4 5 6 7 8
Se - Selenium	1 2 3 4 5 6 7 8
Sr - Strontium	1 2 3 4 5 6 7 8
Ag - Silver	1 2 3 4 5 6 7 8
Tl - Thallium	1 2 3 4 5 6 7 8
% Total Solids	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8

MICHIGAN DEPT. OF ENVIRONMENTAL QUALITY
LABORATORY ANALYSIS REQUEST SHEET

**** SAFETY WARNING ****
YES / NO - INFO ON BACK

MATRIX = SEDIMENT / SOIL

LAB ORDER # 99-08-164 PRIORITY H RECEIVED AT LAB BY DH DATE TIME 8/25/99 930 AM PM

SUBMITTER DIVISION ERD DISTRICT OR OFFICE Lansing CONTACT PERSON FOR QUESTIONS Sunny Krajcovic PHONE 517) 241-8857

LOCATION SAMPLED Plymouth/Haggerty COLLECTED BY Sunny Krajcovic DELIVERED BY S. Krajcovic

ACCEPT "HT" CODE YES / NO SEND RESULTS TO ATTENTION OF Sunny Krajcovic AT ADDRESS (if different than above office)

INDEX 46538 PCA 31351 PROJECT 455176 PH 02

SAMPLE REMARKS.

SAMPLE NO	FIELD ID OR DESCRIPTION	SAMPLE COLLECTED YY/MM/DD	HH MM	SAMPLE INFORMATION
0009	SS9	99/08/24	15:55	
0210	SS10	99/08/24	14:55	
0311	SS11	99/08/24	15:05	
0412	SS12	99/08/24	12:20	
0513	SS13	99/08/24	13:45	
0614	SS14	99/08/24	13:25	
0715	SS15	99/08/24	13:10	
0816	SS16	99/08/24	14:10	

GENERAL CHEMISTRY

GS

COD	1 2 3 4 5 6 7 8
KJEL N, Tot P	1 2 3 4 5 6 7 8
Phenolics	1 2 3 4 5 6 7 8
Total CN	1 2 3 4 5 6 7 8
% Total Solids	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8

ORGANIC

POV VOLATILES

8260 (Sc 1,2)	1 2 3 4 5 6 7 8
BTEX (only)	1 2 3 4 5 6 7 8
8260 plus	1 2 3 4 5 6 7 8

OS PEST & PCB

8081/8121, (Sc 3)	1 2 3 4 5 6 7 8
PCB (only)	1 2 3 4 5 6 7 8
8270 (BN)	1 2 3 4 5 6 7 8

SPECIAL REQUESTS

Lib Search (Qualitative)	
Volatiles	1 2 3 4 5 6 7 8
Base Neutral	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8

INORGANIC

MS

Ca Mg Na K	1 2 3 4 5 6 7 8
Cd Cr Cu Ni Pb Zn	1 2 3 4 5 6 7 8
Fe Co Li Mn	1 2 3 4 5 6 7 8
Al Ba Be Mo Ti V	1 2 3 4 5 6 7 8
Hg - Mercury	1 2 3 4 5 6 7 8
As - Arsenic	1 2 3 4 5 6 7 8
Se - Selenium	1 2 3 4 5 6 7 8
Sr - Strontium	1 2 3 4 5 6 7 8
Ag - Silver	1 2 3 4 5 6 7 8
Tl - Thallium	1 2 3 4 5 6 7 8
% Total Solids	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8

MICHIGAN DEPT. OF ENVIRONMENTAL QUALITY
LABORATORY ANALYSIS REQUEST SHEET

**** SAFETY WARNING ****
YES / NO - INFO ON BACK

MATRIX = SEDIMENT / SOIL

LAB ORDER # 99-08-164 PRIORITY H RECEIVED AT LAB BY DH DATE TIME 8/25/99 930 AM PM

SUBMITTER DIVISION ERD DISTRICT OR OFFICE Lansing CONTACT PERSON FOR QUESTIONS Sunny Krajcovic PHONE (517)241-8857

LOCATION SAMPLED Plymouth/Haggerty COLLECTED BY Sunny Krajcovic DELIVERED BY S. Krajcovic

ACCEPT "HT" CODE YES / NO SEND RESULTS TO ATTENTION OF Sunny Krajcovic AT ADDRESS (if different than above office)

INDEX 46538 PCA 31351 PROJECT 455P76 PH 02

SAMPLE REMARKS

SAMPLE NO	FIELD ID OR DESCRIPTION	SAMPLE COLLECTED YY/MM/DD	HH.MM	SAMPLE INFORMATION
0117	SS17	99/08/24	15:25	
0218	SS18	99/08/24	15:35	
0319	SS19	99/08/24	14:00	
0420	SS20	99/08/24	15:50	
0521	SB1	99/08/24	15:55	
0622	SB2	99/08/24	15:35	
0723	SB3	99/08/24	15:20	
0824	SB4	99/08/24	12:10	

GENERAL CHEMISTRY

GS

COD	1 2 3 4 5 6 7 8
KJEL N, Tot P	1 2 3 4 5 6 7 8
Phenolics	1 2 3 4 5 6 7 8
Total CN	1 2 3 4 5 6 7 8
% Total Solids	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8

ORGANIC

POV VOLATILES

8260 (Sc 1,2)	1 2 3 4 5 6 7 8
BTEX (only)	1 2 3 4 5 6 7 8
8260 plus	1 2 3 4 5 6 7 8

OS PEST & PCB

8081/8121, (Sc 3)	1 2 3 4 5 6 7 8
PCB (only)	1 2 3 4 5 6 7 8
8270 (BN)	1 2 3 4 5 6 7 8

SPECIAL REQUESTS

Lib Search (Qualitative)	
Volatiles	1 2 3 4 5 6 7 8
Base Neutral	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8

INORGANIC

MS

Ca Mg Na K	1 2 3 4 5 6 7 8
Cd Cr Cu Ni Pb Zn	1 2 3 4 5 6 7 8
Fe Co Li Mn	1 2 3 4 5 6 7 8
Al Ba Be Mo Ti V	1 2 3 4 5 6 7 8
Hg - Mercury	1 2 3 4 5 6 7 8
As - Arsenic	1 2 3 4 5 6 7 8
Se - Selenium	1 2 3 4 5 6 7 8
Sr - Strontium	1 2 3 4 5 6 7 8
Ag - Silver	1 2 3 4 5 6 7 8
Tl - Thallium	1 2 3 4 5 6 7 8
% Total Solids	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8

MICHIGAN DEPT. OF ENVIRONMENTAL QUALITY
LABORATORY ANALYSIS REQUEST SHEET

**** SAFETY WARNING ****
YES / NO - INFO ON BACK

MATRIX = SEDIMENT / SOIL

LAB ORDER # 99-08-164 PRIORITY H RECEIVED AT LAB BY DH DATE TIME 8/25/99 930 AM PM

SUBMITTER DIVISION ERD DISTRICT OR OFFICE Lansing CONTACT PERSON FOR QUESTIONS Sunny Krajcovic PHONE ( ) 241-8857

LOCATION SAMPLED Plymouth/Haggerty COLLECTED BY Sunny Krajcovic DELIVERED BY S. Krajcovic

ACCEPT "HT" CODE YES / NO SEND RESULTS TO ATTENTION OF Sunny Krajcovic AT ADDRESS (if different than above office)

INDEX 46538 PCA 31351 PROJECT 455716 PH 02

SAMPLE REMARKS.

SAMPLE NO	FIELD ID OR DESCRIPTION	SAMPLE COLLECTED YY/MM/DD	HH.MM	SAMPLE INFORMATION
01 25	SB5	99/08/24	10:45	
02 26	SB6	99/08/24	11:40	
03 27	SB7	99/08/24	10:15	
04 28	SB8	99/08/24	14:30	
05 29	SB9	99/08/24	14:15	
06 30	SB10	99/08/24	14:35	
07 31	SD1	99/08/99	11:30	
08 32	SD2	99/08/24	10:50	

GENERAL CHEMISTRY

GS

COD	1 2 3 4 5 6 7 8
KJEL N. Tot P	1 2 3 4 5 6 7 8
Phenolics	1 2 3 4 5 6 7 8
Total CN	1 2 3 4 5 6 7 8
% Total Solids	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8

ORGANIC

POV VOLATILES

8260 (Sc 1,2)	1 2 3 4 5 6 7 8
BTEX (only)	1 2 3 4 5 6 7 8
8260 plus	1 2 3 4 5 6 7 8

OS PEST & PCB

8081/8121, (Sc 3)	1 2 3 4 5 6 7 8
PCB (only)	1 2 3 4 5 6 7 8
8270 (BN)	1 2 3 4 5 6 7 8

SPECIAL REQUESTS

Lib Search (Qualitative)	
Volatiles	1 2 3 4 5 6 7 8
Base Neutral	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8

INORGANIC

MS

Ca Mg Na K	1 2 3 4 5 6 7 8
Cd Cr Cu Ni Pb Zn	1 2 3 4 5 6 7 8
Fe Co Li Mn	1 2 3 4 5 6 7 8
Al Ba Be Mo Ti V	1 2 3 4 5 6 7 8
Hg - Mercury	1 2 3 4 5 6 7 8
As - Arsenic	1 2 3 4 5 6 7 8
Se - Selenium	1 2 3 4 5 6 7 8
Sr - Strontium	1 2 3 4 5 6 7 8
Ag - Silver	1 2 3 4 5 6 7 8
Tl - Thallium	1 2 3 4 5 6 7 8
% Total Solids	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8
_____	1 2 3 4 5 6 7 8

MICHIGAN DEPT. OF ENVIRONMENTAL QUALITY
LABORATORY ANALYSIS REQUEST SHEET

**** SAFETY WARNING ****
YES / NO - INFO ON BACK

MATRIX = SEDIMENT / SOIL

LAB ORDER # 99-08-164 PRIORITY H RECEIVED AT LAB BY DH DATE TIME 8/25/99 938 AM PM

SUBMITTER DIVISION ERD DISTRICT OR OFFICE Lansing CONTACT PERSON FOR QUESTIONS Sunny Krajcovic PHONE 517-241-8857

LOCATION SAMPLED Plymouth/Haggerty COLLECTED BY Sunny Krajcovic DELIVERED BY S Krajcovic

ACCEPT "HT" CODE YES / NO SEND RESULTS TO ATTENTION OF Sunny Krajcovic AT ADDRESS (if different than above office)

INDEX 46538 PCA 31351 PROJECT 45576 PH 02

SAMPLE REMARKS.

SAMPLE NO	FIELD ID OR DESCRIPTION	SAMPLE COLLECTED YY/MM/DD	HH:MM	SAMPLE INFORMATION
01 33	SD3	99/08/24	13:35	
02 34	SD4	99/08/24	15:10	
03				
04				
05				
06				
07				
08				

GENERAL CHEMISTRY

GS

COD	1 2 3 4 5 6 7 8
KJEL N, Tot P	1 2 3 4 5 6 7 8
Phenolics	1 2 3 4 5 6 7 8
Total CN	1 2 3 4 5 6 7 8
% Total Solids	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8

ORGANIC

POV VOLATILES

8260 (Sc 1,2)	1 2 3 4 5 6 7 8
BTEX (only)	1 2 3 4 5 6 7 8
8260 plus	1 2 3 4 5 6 7 8

OS PEST & PCB

8081/8121, (Sc 3)	1 2 3 4 5 6 7 8
PCB (only)	1 2 3 4 5 6 7 8
8270 (BN)	1 2 3 4 5 6 7 8

SPECIAL REQUESTS

Lib Search (Qualitative)	
Volatiles	1 2 3 4 5 6 7 8
Base Neutral	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8

INORGANIC

MS

Ca Mg Na K	1 2 3 4 5 6 7 8
Cd Cr Cu Ni Pb Zn	1 2 3 4 5 6 7 8
Fe Co Li Mn	1 2 3 4 5 6 7 8
Al Ba Be Mo Ti V	1 2 3 4 5 6 7 8
Hg - Mercury	1 2 3 4 5 6 7 8
As - Arsenic	1 2 3 4 5 6 7 8
Se - Selenium	1 2 3 4 5 6 7 8
Sr - Strontium	1 2 3 4 5 6 7 8
Ag - Silver	1 2 3 4 5 6 7 8
Tl - Thallium	1 2 3 4 5 6 7 8
% Total Solids	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8
	1 2 3 4 5 6 7 8

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: October 12, 1999

SUBJECT: Review of Data
Received for Review on September 23, 1999

FROM: Stephen L. Ostrodka, Chief (SRT-4J)
Superfund Technical Support Section

TO: Data User: MDEQ

We have reviewed the data by CADRE for the following case:

SITE NAME: Plymouth/Haggerty

CASE NUMBER: 27323 SDG NUMBER: MEAHK5

mber and Type of Samples: 14 (soil) samples

Sample Numbers: MEAHK5, MEANZ5-9, MEBGE6-8, MECBJ8, MECPP8-9,

MECPQ0-1

Laboratory: Sentinel Hrs. for Review: 16 +0.5

Following are our findings:

All NON-detected Sb results are unusable (R) due to extremely low spike recovery.
All detected Sb results and other data are usable with the qualifications described in the attached narrative.

L Finkelberg
10-27-99

: Cecilia Moore
Region 5 TPO
Mail Code: SM-5J

Case: 27323 **SDG: MEAHK5**
Site: Plymouth/Haggerty **Laboratory: Sentinel**

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Fourteen (14) soil samples, numbered MEAHK5, MEANZ5-9, MEBGE6-8, MECBJ8, MECPP8-9, MECPQ0-1 were collected on 8/24/99. The lab received the samples on 8/25/99 in good condition. All samples were analyzed for metals and cyanide. All samples were analyzed using CLP SOW ILM04.0 analysis procedures.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectrometric procedure.

Reviewed By: M. Maltop
Date: 10-19-99

Case: 27323 **SDG: MEAHK5**
Site: Plymouth/Haggerty **Laboratory: Sentinel**

1. HOLDING TIME:

HOLDING TIME CRITERIA

Inorganic

	-- Holding Time --		------- pH -------	
	Primary	Expanded	Primary	Expanded
Metals	180	0	2.0	0.0
Mercury	28	0	2.0	0.0
Cyanide	14	0	12.0	0.0

DC-280: The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

CALIBRATIONS:

CALIBRATION CRITERIA

Inorganic

Percent Recovery Limits

	--- Primary ---		-- Expanded ---	
	Low	High	Low	High
Cyanide	85.00	115.00	70.00	130.00
AA	90.00	110.00	75.00	125.00
ICP	90.00	110.00	75.00	125.00
Mercury	80.00	120.00	65.00	135.00

No problems were found for this qualification.

Reviewed By: M. Matlof
Date: 10-19-99

Case: 27323 **SDG: MEAHK5**
Site: Plymouth/Haggerty **Laboratory: Sentinel**

3. BLANKS:

LABORATORY BLANKS CRITERIA

DC-283: The following inorganic samples are associated with a blank analyte with negative concentration whose absolute value is greater than the instrument detection limit (IDL). Some sample concentrations are greater than the IDL and less than five times the absolute value of the blank concentration. Hits are qualified "J". Some non-detect concentration readings are sufficiently high that the negative blank reading may have caused the IDL to be elevated. These non-detects are flagged "UJ".

MEANZ8
Cyanide

MECPP8
Cyanide

MECPQ0
Cyanide

DC-338: During review of the following inorganic samples, the reported IDL/default CRDL value was used for cyanide.

MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

MATRIX SPIKE CRITERIA

Inorganic

Percent Recovery Limits

Upper	125.0
Lower	75.0
Extreme lower	30.0

Reviewed By: M. Malta
Date: 10-19-99

Case: 27323 **SDG: MEAHK5**
Site: Plymouth/Haggerty **Laboratory: Sentinel**

DC-267: The following inorganic samples are associated with a matrix spike recovery which is high (>125%).
Hits are qualified "J" and non-detects are not flagged.

Manganese
MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low (30-74 %) indicating that sample results may be biased low.
Hits are qualified "J" and non-detects are qualified "UJ".

Lead
MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

DC-269: The following inorganic samples are associated with a matrix spike recovery which is extremely low (<30 %) indicating that sample results may be biased low.
Hits are qualified "J" and non-detects are qualified "R".

Antimony
MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

5. LABORATORY AND FIELD DUPLICATE

No problems were found for this qualification.

Reviewed By: M. Maltop
Date: 10-19-99

Case: 27323 **SDG: MEAHK5**
Site: Plymouth/Haggerty **Laboratory: Sentinel**

6. ICP ANALYSIS

DC-295: The following inorganic samples are associated with an ICP serial dilution percent difference which is not in control. The serial dilution result is greater than the sample result, indicating a potential negative interference. The data must be qualified using professional judgement. All associated data are estimated "J".

Barium
MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

Calcium
MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

Chromium
MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

Iron
MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

Magnesium
MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

Manganese
MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

Vanadium
MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

Zinc
MEAHK5, MEANZ5, MEANZ6, MEANZ7, MEANZ8, MEANZ9
MEBGE6, MEBGE7, MEBGE8, MECBJ8, MECPP8, MECPP9
MECPQ0, MECPQ1

Reviewed By: M. Mattof
Date: 10-19-99

Case: 27323 SDG: MEAHK5
Site: Plymouth/Haggerty Laboratory: Sentinel

7. GFAA ANALYSIS

No GFAA were performed for this case.

8. SAMPLE RESULTS

All data, except those qualified above, are acceptable.

Reviewed By: M. Malloy
Date: 10-19-99

CADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. (The compound may or may not be present)

Reviewed By: M. Malto

Date: 10-19-99

Case # 27323 SDG MEAHK5

Site PLYMOUTH/ HAGGERTY Number of Soil Samples 14

Lab SENTINEL Number of Water Samples 0

Reviewer M MATTOX

Date 10/19/99

Sample Number	MEAHK5		MEANZ5		MEANZ6		MEANZ7		MEANZ8	
Sampling Location	SB9		SB1		SB2		SB3		SB4	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	14 15		15 55		15 35		15 20		12 10	
%Solids	88 4		81 6		88 8		88 5		84 5	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	9420		6310		9260		10600		6780	
ANTIMONY	0 67	R	0 72	R	0 67	R	0 68	R	0 71	R
ARSENIC	67 3		5 1		5 7		7 3		7 0	
BARIUM	59.9	J	55 8	J	79 2	J	73.0	J	51.5	J
BERYLLIUM	0.59		0 35		0 49		0 53		0 36	
CADMIUM	0 11	U	0 12	U	0.11	U	0 11	U	0 12	U
CALCIUM	17500	J	48100	J	63300	J	67400	J	15600	J
CHROMIUM	17 0	J	13 4	J	17 2	J	18 5	J	12 2	J
COBALT	9 1		5 5		8 4		10 0		6 2	
COPPER	21 4		15 6		18 3		21 5		8 7	
IRON	40300	J	13000	J	17700	J	19800	J	15000	J
LEAD	27.6	J	16 0	J	13 0	J	13.1	J	8.5	J
MAGNESIUM	5400	J	14800	J	18100	J	16700	J	4690	J
MANGANESE	426	J	278	J	533	J	425	J	407	J
MERCURY	0.070		0 080		0 060		0 050	U	0 060	U
NICKEL	24.1		16.3		24 7		29 8		16 6	
POTASSIUM	1330		907		1870		2420		1420	
SELENIUM	5 1		2 0		1 7		2 1		1 6	
SILVER	1 2		0 34	U	0 31	U	0 32	U	0 33	U
SODIUM	230		371		281		464		520	
THALLIUM	8 3		2 3		3 4		3 8		3 0	
VANADIUM	24 0	J	17 0	J	23 5	J	25 4	J	17 9	J
ZINC	76 1	J	47 5	J	52 2	J	55 2	J	37 3	J
CYANIDE	0.050	U	0 050	U	0 050	U	0 050	U	0 050	UJ

Case # 27323 SDG MEAHK5

Site PLYMOUTH/ HAGGERTY

Lab SENTINEL

Reviewer M MATTOX

Date 10/19/99

Sample Number	MEANZ9		MEBGE6		MEBGE7		MEBGE8		MECBJ8	
Sampling Location	SB5		SB6		SB7		SB8		SB10	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	10 15		11 40		10 45		14 30		14 35	
%Solids	88 2		87 8		85 2		90 1		92 7	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	9250		10900		7070		10800		11500	
ANTIMONY	0 68	R	0 68	R	0 70	R	0 67	R	4 8	J
ARSENIC	14 2		7 6		9 9		7 5		32 4	
BARIUM	125	J	64 5	J	71 2	J	68 1	J	1120	J
BERYLLIUM	0 57		0 54		0 35		0 52		1 6	
CADMIUM	0 29		0 11	U	0 12	U	0 11	U	15 1	
CALCIUM	47500	J	73300	J	68600	J	70800	J	34100	J
CHROMIUM	23 8	J	19 5	J	13 6	J	18 1	J	68 3	J
COBALT	9 0		9 1		8 3		9 9		15 2	
COPPER	32 9		19 0		14 9		20 9		308	
IRON	21600	J	20500	J	14600	J	19800	J	74000	J
LEAD	71 0	J	12 8	J	8 4	J	12 0	J	1590	J
MAGNESIUM	13100	J	21900	J	21500	J	15000	J	4810	J
MANGANESE	481	J	371	J	350	J	406	J	709	J
MERCURY	0 070		0 060	U	0 060	U	0 050	U	1 2	
NICKEL	25.5		26 1		21 8		29 5		64.3	
POTASSIUM	1920		2720		1680		2290		1540	
SELENIUM	3.1		2 3		1.6		2 4		10 8	
SILVER	0 50		0 32	U	0 33	U	0 31	U	4 6	
SODIUM	427		356		396		298		828	
THALLIUM	3 8		3 8		2 5		3 4		16 0	
VANADIUM	24.1	J	28 2	J	19 1	J	24 8	J	30 2	J
ZINC	133	J	51 6	J	37 6	J	55 1	J	2030	J
CYANIDE	0 050	U	0 60		0.050	U	0 050	U	1 7	

Case # 27323 SDG MEAHK5

Site PLYMOUTH/ HAGGERTY

Lab SENTINEL

Reviewer M MATTOX

Date 10/19/99

Sample Number :	MECPP8		MECPP9		MECPQ0		MECPQ1			
Sampling Location	SD2		SD3		SD4		SD1			
Matrix	Soil		Soil		Soil		Soil			
Units	mg/Kg		mg/Kg		mg/Kg		mg/Kg			
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999			
Time Sampled	10:50		13 35		15 10		11 30			
%Solids	72 5		69 3		38 3		76 0			
Dilution Factor	1 0		1 0		1 0		1 0			
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	3270		5460		3390		9190			
ANTIMONY	0 81	R	0 86	R	2 6	J	0 78	R		
ARSENIC	17 3		6 4		6 7		5 8			
BARIUM	53 3	J	46 9	J	234	J	62 1	J		
BERYLLIUM	0 26		0 26		0 41		0 49			
CADMIUM	2.9		3 5		34 8		0 13	U		
CALCIUM	37800	J	81500	J	131000	J	71800	J		
CHROMIUM	14 0	J	11 3	J	13 8	J	17 1	J		
COBALT	8 8		5 5		4 8		9 3			
COPPER	52 7		16 9		140		18 1			
IRON	17000	J	13000	J	12500	J	17800	J		
LEAD	67 4	J	27.0	J	218	J	11.1	J		
MAGNESIUM	5150	J	9560	J	3460	J	22200	J		
MANGANESE	253	J	230	J	1310	J	383	J		
MERCURY	0.070	U	0 070	U	0 30		0 070	U		
NICKEL	17.6		15 8		54 2		25 5			
POTASSIUM	480		1410		592		2240			
SELENIUM	2.8		2 4		6 1		2.1			
SILVER	0 42		0 40	U	0 72	U	0 36	U		
SODIUM	544		606		1550		495			
THALLIUM	2 7		2 3		1 7		2 8			
VANADIUM	12.7	J	14 9	J	9 1	J	24 6	J		
ZINC	315	J	125	J	6420	J	46 3	J		
CYANIDE	0 16	J	0.060	U	0 92	J	0 060	U		

QC EXCEPTION SUMMARY REPORT

CASE\SAS#: 27323 SITE: PLYMOUTH / HAGGERTY MATRIX: SOIL WATER SAMPLE SPK: /

DATA SET: _____ LAB: SENTINEL CONC: _____ WATER SAMPLE DUP: /

LAB QC # _____ REVIEWED BY: M. MATTOX SOIL SAMPLE SPK: MEBGE65

DATE: 10-18-99 SOIL SAMPLE DUP: MEBGE6D

FORM #		FORM 2	FORM 2	FORM 3	FORM 3	FORM 3	FORM 4	FORM 5	FORM 6	FORM 7	FORM 7	FORM 9	FORM 9	FORM 6	FORM 5	FIELD	FIELD	FIELD	FIELD		
ELEMENT	HOLD TIME	INITIAL CALIB	CONTI N CALIB	CALIB BLANK	PREP WATER BLANK	PREP SOIL BLANK	ICS %R	SOIL SPIKE %R	SOIL DUP RPD	LCS AQ	LCS SOIL	SERIAL DILUTION AQUEOUS	SERIAL DILUTION SOIL	AQ DUP RPD	AQ SPIKE %R	BLANK	DUP RPD	BLANK	DUP RPD	GFAA DUP	GFAA ANALYT SPIKE
ALUMINUM																					
ANTIMONY								17.7													
ARSENIC																					
BARIUM													10.5								
BERYLLIUM																					
CADMIUM																					
CALCIUM													11.6								
CHROMIUM													18.3								
COBALT																					
COPPER																					
IRON													13.5								
LEAD								56.1													
MAGNESIUM													10.6								
MANGANESE								159.5					13.4								
MERCURY																					
NICKEL																					
POTASSIUM																					
SELENIUM																					
SILVER																					
SODIUM																					
THALLIUM																					
TIN																					
VANADIUM													12.0								
ZINC													19.1								
CYANIDE			-2.0			-0.10															

TELEPHONE MEMORANDUM

TO: Charles

FROM: Amanda / Sentinel

DATE/TIME: 8/25/99

SUBJECT: case # 27323
SDG # MEAHK5

DESCRIPTION:

Need new EPA sample #s for the following soils:

MECBK0	~~stan location~~:	SD2
K1		SD3
K2		SD4
MECBJ9	~~SD 24 mAG~~	SD1

These ~~sample#s~~ were already used on waters.

8/25 New #s: MECPP8 corresponds w/ MECBK0
MECPP9 K1
MECPQ0 K2
MECPQ1 J9 per Charles.

Corrective Action Required: Notify Dyncorp.

CorrectiveActionTaken:

Signature: Amanda B. Gossett **Date:** 8/25/99

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: MEAHK5 CERCLIS No: ZZ

Case No: 27323 Site Name Location: Plymouth / Haggerty

Contractor or EPA Lab: Sentinel Data User: MDEQ

No. of Samples: 14 Date Sampled or Data Received: Sep. 23, 1999

Have Chain-of-Custody records been received? Yes ✓ No
Have traffic reports or packing lists been received? Yes ✓ No
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ____ No____
If no, which traffic report or packing list numbers are missing?

_____ _____ _____ _____

_____ _____ _____ _____

Are basic data forms in? Yes ✓ No
No of samples claimed: 14 No. of samples received: 14

Received by: Stephanie Tobin Date: 09-23-99

Received by LSSS: Stephanie Tobin Date: 09-23-99

Review started: 10-8-99 Reviewer Signature: Marjorie Matlock

Total time spent on review: 16.0 Date review completed: 10-19-99

Copied by: Lynette Burnett Date: 10-28-99

Mailed to user by: Lynette Burnett Date: 10-28-99

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: _____ Date: _____

Data review received by: _____ Date: _____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

_____

_____

Received by Data Mgmt. Coordinator for Files. Data: _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: _____

SUBJECT: **Review of Data**
Received for Review on October 4, 1999

FROM: **Stephen L. Ostrodka, Chief (SRT-4J)**
Superfund Technical Support Section

for Stephen Ostrodka
Richard L Byrnes
10/27/99

TO: **Data User:** MDEQ

We have reviewed the data for the following case:

Site name: Plymouth/Haggerty (MI)

Case number: 27323 **SDG Number:** EBYJ9

Number and Type of Samples: 20 soil & water samples

41 10/27/99

Sample Numbers: EBYJ9, EBYK0, ECND7-9, ECTJ3-9, ECTK0-4, EZB39-42

Laboratory: SWOK **Hrs. for Review:** 19 hrs + 1.0

Following are our findings:

the data are usable and acceptable with the qualifications discussed in the attached narrative.

Richard L Byrnes

RECEIVED
NOV - 5 1999
ERD-SUPERFUND

CC: Cecilia Moore
Region 5 TPO
Mail Code: SM-5J

Case Number : 27323 **SDG Number: EBYJ9**
Site Name: Plymouth/Haggerty (MI) **Laboratory: SWOK**

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

#1 nes 10/27/99

Twenty soil and water samples (EBYJ9, EBYK0, ECND7-9, ECTJ3-9, ECTK0-4, EZB39-42) were collected on 08/24/99. The lab received the samples on 08/25/99 in good condition. Samples ECTJ9, ECTK0-4 were analyzed for the full list of organic analytes. The remaining samples were analyzed for the list of SVOA and Pest/PCB. All samples were analyzed according to CLP SOW OLMO3.2 3/90.

Prepared By: Steffanie Tobin (Lockheed/ESAT)
Date: October 18, 1999

Case Number : 27323 **SDG Number: EBYJ9**
Site Name: Plymouth/Haggerty (MI) **Laboratory: SWOK**

1. HOLDING TIME

The following semivolatile soil samples are outside primary extraction holding time criteria. Hits are qualified "J" and non-detects are qualified "UJ".

EBYJ9RE, EBYK0RE, ECND7RE, ECND8RE, ECTJ3RE

The following pesticide soil samples are outside primary extraction holding time criteria. Hits are qualified "J" and non-detects are qualified "UJ".

EBYJ9, EBYJ9DL, EBYK0, EBYK0DL, ECND7, ECND7DL, ECND8, ECND8DL, ECND9, ECND9DL, ECTJ3, ECTJ3DL, ECTJ5, ECTJ5DL, ECTJ6, ECTJ6DL, ECTJ7, ECTJ7DL ECTJ8, ECTJ8DL, EZB39, EZB39DL, EZB41, EZB41DL, EZB42, EZB42DL

2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems were found for this qualification.

3. CALIBRATION

The following volatile samples are associated with a continuing calibration whose corresponding initial calibration has percent relative standard deviation (%RSD) outside primary criteria. Hits are qualified "J" and non-detects are flagged "UJ". However, if the non-detects were flagged as "R" under other qualification, then the "R" flag will be the final flag.

Methylene Chloride
ECTJ9, ECTK0, ECTK1, ECTK2, ECTK2MS, ECTK2MSD, ECTK3, ECTK4, VBLK1, VBLK2, VHBLK1

The following volatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Bromomethane, Chloroethane
ECTK2, VBLK2, VHBLK1

Methylene Chloride, Acetone, 2-Butanone, 4-Methyl-2-Pentanone, 2-Hexanone
ECTJ9, ECTK0, ECTK1, ECTK2, ECTK2MS, ECTK2MSD, ECTK3, ECTK4, VBLK1, VBLK2, VHBLK1

The following semivolatile samples are associated with a continuing calibration whose corresponding initial calibration has relative response factors (RRFs) outside primary criteria. Hits are flagged "J" and non-detects are qualified "UJ".

2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol
ECTJ9, ECTK0, ECTK1, ECTK2, ECTK2MS, ECTK2MSD, ECTK3, ECTK4, SBLK1

Case Number : 27323 **SDG Number: EBYJ9**
Site Name: Plymouth/Haggerty (MI) **Laboratory: SWOK**

The following semivolatile samples are associated with a continuing calibration percent difference (%D) outside primary criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Hexachlorocyclopentadiene
EBYJ9RE, EBYK0RE, ECND7RE, ECND8RE, ECTJ3RE, ECTJ9, ECTK0, ECTK1, ECTK2, ECTK2MS, ECTK2MSD, ECTK3, ECTK4, SBLK3

2,6-Dinitrotoluene
ECTJ9, ECTK0, ECTK1, ECTK2, ECTK2MS, ECTK2MSD, ECTK3, ECTK4, SBLK1

2,4-Dinitrophenol
EBYJ9RE, EBYK0RE, ECND7RE, ECND8RE, ECTJ3RE, SBLK3

4,6-Dinitro-2-methylphenol
SBLK1

Butylbenzylphthalate, bis(2-Ethylhexyl)phthalate, Di-n-octylphthalate
ECTJ9, ECTK0, ECTK1, ECTK2, ECTK2MS, ECTK2MSD, ECTK3, ECTK4

3,3'-Dichlorobenzidine
ECTJ9, ECTK0, ECTK1, ECTK2, ECTK2MS, ECTK2MSD, ECTK3, ECTK4, SBLK1

4. METHOD BLANKS

The following volatile samples have analyte concentrations reported below the CRQL and less than or equal to ten times (10X) the associated method blank concentration. Reported sample concentrations have been elevated to the CRQL. Hits are qualified "U" and non-detects are not flagged.

Methylene Chloride
ECTK2MS

The following semivolatile samples have analyte concentrations reported below the CRQL and less than or equal to five times (5X) the associated method blank concentration. Reported sample concentrations have been elevated to the CRQL. Hits are flagged "U" and non-detects are not flagged.

EBYJ9, EBYK0, ECND7, ECND8, ECND9, ECTJ3, ECTJ4, ECTJ6, ECTJ7, ECTJ8, EZB39
EZB41, EZB42
1,4-Dichlorobenzene

The following semivolatile samples have analyte concentrations reported below the CRQL and less than or equal to ten times (10X) the associated method blank concentration. Reported sample concentrations have been elevated to the CRQL. Hits are qualified "U" and non-detects are not flagged.

bis(2-Ethylhexyl)phthalate
EBYJ9, EBYJ9RE, EBYK0, EBYK0RE, ECND7, ECND7RE, ECND8, ECND9, ECTJ3RE, ECTJ4,

ECTJ4MS, ECTJ4MSD, ECTJ5, ECTJ6, ECTJ7, ECTJ8, EZB39, EZB41, EZB42, ECTK2MS, ECTK2MSD, ECTJ9, ECTK0, ECTK1, ECTK2, ECTK3, ECTK4

The following pesticide samples have analyte concentrations reported above the CRQL and less than or equal to five times (5X) the associated method blank concentration. Hits are qualified "U" and non-detects are not flagged.

ECTJ4, ECTJ4MS, ECTJ4MSD
Heptachlor

The following pesticide samples have analyte concentrations reported below the CRQL and less than or equal to five times (5X) the associated method blank concentration. Reported sample concentrations have been elevated to the CRQL. Hits are qualified "U" and non-detects are not flagged.

ECTJ4DL
Heptachlor

5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

The following semivolatile samples have one base/neutral surrogate recovery above the upper limit of the criteria window. Hits and non-detects are not flagged since the protocol allows at least two surrogate recoveries in either base/neutral or acid fraction to be out of control before a reanalysis or qualification is required.

ECTJ4MSD, ECTJ7, ECTJ8, EZB39, EZB42, ECTK2, ECTK2MSD, ECTK4

The following semivolatile samples have one acid surrogate recovery above the upper limit of the criteria window. Hits and non-detects are not flagged since the protocol allows at least two surrogate recoveries in either base/neutral or acid fraction to be out of control before a reanalysis or qualification is required.

EBYJ9, ECND7, ECND8, ECND9, ECTJ3, ECTJ4, ECTJ4MSD, ECTJ5, ECTJ6, ECTJ8

The following semivolatile samples have two or more base/neutral surrogate recoveries above the upper limit of the criteria window. Hits are qualified "J" and non-detects are not flagged.

EBYJ9, EBYK0, ECND7, ECND8, ECTJ3, ECTJ4MS

The following semivolatile samples have two or more acid surrogate recoveries above the upper limit of the criteria window. Hits qualified "J" and non-detects are not flagged.

EBYK0

The following semivolatile samples have two or more base/neutral surrogate recoveries below the lower limit of the criteria window and greater than 10%. Hits are qualified "J" and non-detects are qualified "UJ".

ECND8RE

Case Number : 27323 **SDG Number: EBYJ9**
Site Name: Plymouth/Haggerty (MI) **Laboratory: SWOK**

The following semivolatile samples have two or more acid surrogate recoveries below the lower limit of the criteria window and greater than 10%. Hits and non-detects are qualified below.

ECND8RE

The following semivolatile samples have acid surrogate recoveries of less than 10%. Hits are qualified "J" and non-detects are qualified "R".

ECND8RE

The following pesticide samples have surrogate percent recoveries which exceed the upper limit of the criteria window. Hits and non-detects are not flagged due to sample dilutions.

EBYK0DL, ECND7DL, ECTJ8DL

The following pesticide samples have surrogate percent recoveries which exceed the upper limit of the criteria window. Hits are qualified "J" and non-detects are not flagged.

ECND7, ECTJ8

The following diluted pesticide samples have surrogate percent recoveries of less than 10%. Hits and non-detects are not flagged due to sample dilutions.

EZB39DL

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The relative percent difference (RPD) between the following volatile matrix spike and matrix spike duplicate recoveries is outside criteria. Hits are qualified "J" and non-detects are qualified "UJ" for the unspiked sample.

ECTK2MS, ECTK2MSD
1,1-Dichloroethene

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery outside criteria. Hits are qualified "J" and non-detects are not qualified for the unspiked sample.

ECTJ4MS
Phenol, 2-Chlorophenol, 1,2,4-Trichlorobenzene, 4-Chloro-3-methylphenol, 4-Nitrophenol, 2,4-Dinitrotoluene

ECTJ4MSD
Phenol, 1,2,4-Trichlorobenzene, 4-Chloro-3-methylphenol, 4-Nitrophenol, 2,4-Dinitrotoluene

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery outside the

limit but equal to 100%. Hits and non-detects are not qualified for the unspiked sample.

ECTK2MSD
2,4-Dinitrotoluene

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery outside criteria. Hits are qualified "J" and non-detects are not qualified for the unspiked sample.

ECTK2MS, ECTK2MSD
Pentachlorophenol

The following semivolatile matrix spike/matrix spike duplicate samples have percent recovery outside criteria. Hits are qualified "J" and non-detects are "UJ" for the unspiked sample.

ECTK2MS, ECTK2MSD
4-Nitrophenol

The relative percent difference (RPD) between the following pesticide matrix spike and matrix spike duplicate recoveries is outside criteria. Hits are qualified "J" and non-detects are "UJ" for the unspiked sample.

ECTK2MS, ECTK2MSD
gamma-BHC (Lindane)

7. FIELD BLANK AND FIELD DUPLICATE

Sample ECTK0 is the field duplicate of ECTK1. ECTK4 is the field blank. ECTK4 contains 1 SVOA TIC and ECTK0 and ECTK1 are clean.

8. INTERNAL STANDARDS

No problems were found for this qualification.

9. COMPOUND IDENTIFICATION

After reviewing the mass spectra and chromatograms, it appears that all VOA, SVOA, and Pesticide/PCB compounds were properly identified.

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following volatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

VBLK1
Methylene Chloride, 1,1,2,2-Tetrachloroethane

Case Number : 27323 **SDG Number: EBYJ9**
Site Name: Plymouth/Haggerty (MI) **Laboratory: SWOK**

The following semivolatile samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

EBYJ9
Phenanthrene, Carbazole, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

EBYJ9RE
Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Butylbenzylphthalate, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

EBYK0
Phenanthrene, Anthracene, Carbazole, Di-n-butylphthalate, Fluoranthene, Pyrene, Butylbenzylphthalate, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

EBYK0RE
Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Butylbenzylphthalate, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

ECND7
Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

ECND7RE
Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

ECND8
Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

ECND9
2-Methylnaphthalene, Phenanthrene, Di-n-butylphthalate, Chrysene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene

ECTJ3
Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

Case Number : 27323 **SDG Number: EBYJ9**
Site Name: Plymouth/Haggerty (MI) **Laboratory: SWOK**

ECTJ3RE
Naphthalene, 2-Methylnaphthalene, Acenaphthene, Dibenzofuran, Diethylphthalate, Fluorene, Carbazole, Di-n-butylphthalate, Butylbenzylphthalate, Dibenz(a,h)anthracene

ECTJ4
Phenanthrene, Di-n-butylphthalate, Chrysene, Benzo(g,h,i)perylene

ECTJ4MS
2-Methylnaphthalene, Phenanthrene, Di-n-butylphthalate, Chrysene, Benzo(a)pyrene, Benzo(g,h,i)perylene

ECTJ4MSD
Phenanthrene, Di-n-butylphthalate, Chrysene, Benzo(a)pyrene, Benzo(g,h,i)perylene

ECTJ5
Di-n-butylphthalate, Chrysene

ECTJ6
Phenanthrene, Di-n-butylphthalate, Chrysene

ECTJ7
Di-n-butylphthalate, Fluoranthene, Pyrene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

ECTJ8
Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Dibenzofuran, Phenanthrene, Anthracene, Carbazole, Di-n-butylphthalate, Benzo(a)anthracene, Di-n-octylphthalate, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EZB39
Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Phenanthrene, Anthracene, Carbazole, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(g,h,i)perylene

EZB41
Phenanthrene, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

EZB42
Acenaphthylene, Phenanthrene, Anthracene, Di-n-butylphthalate, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene

SBLK1
Phenol, bis(2-Ethylhexyl)phthalate

Case Number : 27323 **SDG Number: EBYJ9**
Site Name: Plymouth/Haggerty (MI) **Laboratory: SWOK**

SBLK2
1,4-Dichlorobenzene, bis(2-Ethylhexyl)phthalate

SBLK3
bis(2-Ethylhexyl)phthalate

The following pesticide samples have analyte concentrations below the quantitation limit (CRQL). All results below the CRQL are qualified "J".

EBYK0DL
4,4'-DDD

ECND7DL
4,4'-DDD, 4,4'-DDT, Methoxychlor

ECND9DL
4,4'-DDT

ECTJ3DL
4,4'-DDE, 4,4'-DDD, 4,4'-DDT

ECTJ4MS
Methoxychlor

ECTJ6, ECTJ7DL
4,4'-DDE

ECTJ8
Endrin, Endosulfan sulfate

ECTJ8DL
4,4'-DDE, alpha-Chlordane, gamma-Chlordane

EZB39, EZB41DL
Endosulfan II, 4,4'-DDD

The following pesticide samples have analytes for which the percent difference between column results exceeds primary criteria. Hits are qualified "J".

EBYJ9
4,4'-DDE

EBYK0
4,4'-DDE, 4,4'-DDT

ECND7DL
4,4'-DDD, 4,4'-DDT, Methoxychlor

ECND9DL, ECTJ3DL
4,4'-DDT

ECTJ4MS
gamma-BHC (Lindane), Aldrin, Dieldrin, Endrin, 4,4'-DDT, Methoxychlor

ECTJ4MSD
gamma-BHC (Lindane), Aldrin, 4,4'-DDT

ECTJ7
4,4'-DDE

ECTJ8
4,4'-DDE, Endrin, Endosulfan sulfate, 4,4'-DDT, alpha-Chlordane

ECTJ8DL
alpha-Chlordane, gamma-Chlordane

EZB39, EZB41
4,4'-DDE, 4,4'-DDT

EZB41DL
Endosulfan II

EZB42
4,4'-DDE, Endosulfan II, 4,4'-DDD, 4,4'-DDT

PBLKSI
Heptachlor

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baseline for the pesticide analysis was acceptable.

12. ADDITIONAL INFORMATION

Below is the summary of the pH for the samples of this data set:

Sample ID	pH
ECTJ9	<2.0
ECTK0	<2.0

Prepared By: Steffanie Tobin (Lockheed/ESAT)
Date: October 18, 1999

Case Number : 27323 **SDG Number: EBYJ9**
Site Name: Plymouth/Haggerty (MI) **Laboratory: SWOK**

ECTK1	<2.0
ECTK2	<2.0
ECTK3	<2.0
ECTK4	<2.0

For the Pest/PCB fraction, the DDE and DDT results for EBYJ9, EBYK0 and EZB41 were quantitated outside the calibration range. The DDE result for ECND7, ECND8, ECND9, EZB39 was quantitated outside the calibration range. The DDT result for ECTJ8 was quantitated outside the calibration range. the DDE, Endosulfan II and DDT results for EZB42 were quantitated outside the calibration range. For the analyte that exceeded the calibration range in the original sample analysis; the results of the diluted analysis should be considered the sample's analyte concentration.

The Pest/PCB samples ECTJ3, ECTJ4, ECTJ5, ECTJ6, ECTJ7 were reanalyzed with the dilution due to interference. The results of diluted samples should be used for result validation.

All soil samples (except for ECTJ4) were re-extracted but the laboratory did not extract the matrix spike/matrix spike duplicate of any soil sample which was re-extracted.

Prepared By: Steffanie Tobin (Lockheed/ESAT)
Date: October 18, 1999

CADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the present of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present)
H	Sample result is estimated and biased high.
L	Sample result is estimated and biased low.

Volatile Analysis Data - VBLK2
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	16.44	11.000	J

FILE NAME: EBYJ9.SDG DATE: 09/30/99 TIME: 09:45 CADRE99 PAGE: 1

Semivolatile Analysis Data - SBLK3
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
123-42-2	2-PENTANONE,4-HYDROXY-4-METHYL-	2.12	2400.000	AJN
	UNKNOWN	3.20	190.000	J
	UNKNOWNAMIDE	15.12	1100.000	J
	UNKNOWN	20.94	180.000	J

FILE NAME: EBYJ9.SDG DATE: 09/30/99 TIME: 09:45 CADRE99 PAGE: 2

Semivolatile Analysis Data - ECND8RE
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.63	88.000	J
	UNKNOWN	4.16	140.000	J
83-47-6	.GAMMA.-SITOSTEROL	19.87	150.000	JN
	UNKNOWN	20.45	84.000	J

FILE NAME: EBYJ9.SDG DATE: 09/30/99 TIME: 09:45 CADRE99 PAGE: 3

Semivolatile Analysis Data - ECND7RE
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.19	1400.000	BJ
	UNKNOWN	3.31	140.000	J
	UNKNOWN	3.46	180.000	J
	UNKNOWN	3.62	710.000	J
	UNKNOWN	4.08	280.000	J
	UNKNOWN	4.16	1200.000	J
	UNKNOWN	4.19	390.000	J
	UNKNOWN	17.52	91.000	J
	UNKNOWN	18.78	130.000	J
59-02-9	VITAMINE	19.00	160.000	JN
4651-51-8	ERGOST-5-EN-3-OL,(3.BETA.)-	19.49	140.000	JN
83-47-6	.GAMMA.-SITOSTEROL	19.88	1700.000	JN
471-68-1	OLEAN-12-ENE	20.07	170.000	JN
	UNKNOWN	20.10	170.000	J
	UNKNOWN	20.16	110.000	J
638-95-9	.ALPHA.-AMYRIN	20.27	310.000	JN
1058-61-3	STIGMAST-4-EN-3-ONE	20.45	480.000	JN
	UNKNOWN	20.63	150.000	J
	UNKNOWN	20.75	460.000	J
	UNKNOWN	20.87	540.000	J

FILE NAME: EBYJ9.SDG DATE: 09/30/99 TIME: 09:45 CADRE99 PAGE: 4

Semivolatile Analysis Data - EBYKORE
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.19	1400.000	BJ
	UNKNOWN	3.62	590.000	J
	UNKNOWNKETONE	4.08	340.000	J
	UNKNOWN	4.16	1300.000	J
	UNKNOWN	4.19	400.000	J
	UNKNOWN	18.78	420.000	J
59-02-9	VITAMINE	19.00	340.000	JN
	UNKNOWN	19.22	320.000	J
4651-51-8	ERGOST-5-EN-3-OL,(3.BETA.)-	19.48	370.000	JN
83-47-6	.GAMMA.-SITOSTEROL	19.88	2300.000	JN
	UNKNOWNPAH	19.95	320.000	J
	UNKNOWN	19.99	260.000	J
	UNKNOWN	20.10	1100.000	J
	UNKNOWN	20.16	590.000	J
	UNKNOWN	20.20	340.000	J
	UNKNOWN	20.26	780.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	20.45	1300.000	JN
	UNKNOWNKETONE	20.53	290.000	J
	UNKNOWN	20.63	340.000	J
	UNKNOWN	20.76	250.000	J
	UNKNOWN	21.04	320.000	J

FILE NAME: EBYJ9.SDG DATE: 09/30/99 TIME: 09:45 CADRE99 PAGE: 5

Semivolatile Analysis Data - ECTJ3RE
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	2.99	560.000	J
	UNKNOWN	3.19	1300.000	BJ
	UNKNOWN	3.62	740.000	J
	UNKNOWN	4.08	220.000	J
	UNKNOWN	4.16	1500.000	J
	UNKNOWN	4.19	350.000	J
132-65-0	DIBENZOTHIOPHENE	11.18	170.000	JN
203-64-5	4H-CYCLOPENTA[DEF]PHENANTHRENE	12.40	270.000	JN
35465-71-5	2-PHENYLNAPHTHALENE	12.76	170.000	JN
	BUTYLHEXADECANOATE	14.04	140.000	J
243-17-4	11H-BENZO[B]FLUORENE	14.35	240.000	JN
243-17-4	11H-BENZO[B]FLUORENE	14.45	190.000	JN
123-95-5	OCTADECANOICACID,BUTYLESTER	15.21	250.000	JN
	UNKNOWNPAH	15.94	170.000	J
192-97-2	BENZO[E]PYRENE	17.82	630.000	JN
	UNKNOWN	18.88	160.000	J
	UNKNOWNPAH	19.26	160.000	J
83-47-6	.GAMMA.-SITOSTEROL	19.88	340.000	JN
	UNKNOWN	20.29	170.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	20.45	200.000	JN
	1,2:3,4-DIBENZPYRENE	20.94	160.000	J
191-07-1	CORONENE	21.48	180.000	JN

FILE NAME: EBYJ9.SDG DATE: 09/30/99 TIME: 09:45 CADRE99 PAGE: 6

Semivolatile Analysis Data - EBYJ9RE
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	2.98	1200.000	J
	UNKNOWN	3.18	2100.000	BJ
	UNKNOWN	3.61	850.000	J
	UNKNOWN	4.15	1800.000	J
40710-32-5	NONAHEXACONTANOICACID	16.86	640.000	JN
57-88-5	CHOLESTEROL	19.00	690.000	JN
4651-51-8	ERGOST-5-EN-3-OL,(3.BETA.)-	19.49	610.000	JN
	UNKNOWN	19.62	650.000	J
83-47-6	.GAMMA.-SITOSTEROL	19.88	3700.000	JN
	UNKNOWNPAH	19.99	1000.000	J
471-68-1	OLEAN-12-ENE	20.07	680.000	JN
	UNKNOWN	20.11	980.000	J
	UNKNOWN	20.16	680.000	J
	UNKNOWN	20.21	670.000	J
	UNKNOWNPAH	20.27	1200.000	J
	UNKNOWNHYDROCARBON	20.39	580.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	20.46	1800.000	JN
	UNKNOWNKETONE	20.54	520.000	J
	UNKNOWN	20.64	660.000	J
	UNKNOWN	20.76	480.000	J
	UNKNOWNHYDROCARBON	20.87	2000.000	J

Semivolatile Analysis Data - ECTJ9
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q

Semivolatile Analysis Data - ECTK0
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q

Semivolatile Analysis Data - ECTK1
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q

Semivolatile Analysis Data - ECTK2
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	2,3,3-TRIMETHYL-1-HEXENE	3.67	3.000	JN

FILE NAME: EBYJ9.SDG DATE: 09/30/99 TIME: 09:45 CADRE99 PAGE: 11

Semivolatile Analysis Data - ECTK3
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q

FILE NAME: EBYJ9.SDG DATE: 09/30/99 TIME: 09:45 CADRE99 PAGE: 12

Semivolatile Analysis Data - ECTK4
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.67	2.000	J

FILE NAME: EBYJ9.SDG DATE: 09/30/99 TIME: 09:45 CADRE99 PAGE: 13

Semivolatile Analysis Data - SBLK1
Tentatively Identified Compounds

ASE NO: 27323 LABORATORY: SWL-TULSA
DG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	3.50	4.000	J
	UNKNOWN	3.82	6.000	J

FILE NAME: EBYJ9.SDG DATE: 09/30/99 TIME: 09:45 CADRE99 PAGE: 14

Semivolatile Analysis Data - SBLK2
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	1.06	86.000	J
141-79-7	3-PENTEN-2-ONE,4-METHYL-	1.11	9900.000	AJN
	UNKNOWN	1.24	1500.000	J
123-42-2	2-PENTANONE,4-HYDROXY-4-METHYL-	1.45	38000.000	AJN
	UNKNOWN	1.87	250.000	J
	UNKNOWN	2.07	260.000	J
	UNKNOWN	2.64	390.000	J
3658-77-3	2,5-DIMETHYL-4-HYDROXY-3(2H)-FURANONE	2.68	72.000	JN

FILE NAME: EBYJ9.SDG DATE: 09/30/99 TIME: 09:45 CADRE99 PAGE: 15

Semivolatile Analysis Data - EBYJ9
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	1.95	800.000	J
	UNKNOWN	2.08	2200.000	BJ
90-02-8	BENZALDEHYDE,2-HYDROXY-	2.61	790.000	JN
2091-29-4	9-HEXADECENOICACID	8.45	740.000	JN
74685-36-2	OXACYCLOTETRADECANE-2,11-DIONE,13-METHY	8.52	770.000	JN
	UNKNOWNHYDROCARBON	8.94	1000.000	J
112-80-1	OLEICACID	9.97	2700.000	JN
57-11-4	OCTADECANOICACID	10.10	810.000	JN
	UNKNOWNAMIDE	11.49	5400.000	J
57-88-5	CHOLESTEROL	15.97	920.000	JN
26047-31-4	ERGOST-7-EN-3-OL,(3.BETA.)-	16.54	860.000	JN
83-48-7	STIGMASTEROL	16.71	910.000	JN
	UNKNOWN	16.92	1700.000	J
83-47-6	.GAMMA.-SITOSTEROL	17.01	4900.000	JN
127-22-0	TARAXEROL	17.07	1900.000	JN
471-68-1	OLEAN-12-ENE	17.17	1600.000	JN
	UNKNOWN	17.25	1200.000	J
	UNKNOWNPAH	17.41	1900.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	17.66	2400.000	JN
	UNKNOWN	17.86	970.000	J
	UNKNOWNKETONE	17.94	820.000	J
	UNKNOWNHYDROCARBON	18.04	4000.000	J
	UNKNOWN	18.22	790.000	J
	UNKNOWN	18.37	4000.000	J
	UNKNOWN	18.44	860.000	J

Semivolatile Analysis Data - EBYK0
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWNALDOLCONDENSATE	1.11	9400.000	AJ
	UNKNOWN	1.95	980.000	J
	UNKNOWN	2.08	1900.000	BJ
123-19-3	4-HEPTANONE	2.61	660.000	JN
	UNKNOWN	2.65	2100.000	BJ
872-05-9	1-DECENE	4.85	470.000	JN
1002-84-2	PENTADECANOICACID	7.53	440.000	JN
2091-29-4	9-HEXADECENOICACID	8.45	550.000	JN
2091-29-4	9-HEXADECENOICACID	8.53	710.000	JN
	UNKNOWNORGANICACID	8.94	880.000	J
6765-39-5	1-HEPTADECENE	9.96	820.000	JN
57-11-4	OCTADECANOICACID	10.10	560.000	JN
	UNKNOWNAMIDE	11.49	3700.000	J
112-85-6	DOCOSANOICACID	12.80	520.000	JN
6624-79-9	1-DOTRIACONTANOL	13.59	1300.000	JN
57-88-5	CHOLESTEROL	15.95	500.000	JN
4651-51-8	ERGOST-5-EN-3-OL,(3.BETA.)-	16.53	710.000	JN
83-48-7	STIGMASTEROL	16.71	1000.000	JN
83-47-6	.GAMMA.-SITOSTEROL	17.01	4300.000	JN
1058-61-3	STIGMAST-4-EN-3-ONE	17.20	910.000	JN
	UNKNOWN	17.26	790.000	J
4030-92-6	ERGOSTA-4,22-DIEN-3-ONE	17.37	1000.000	JN
1058-61-3	STIGMAST-4-EN-3-ONE	17.66	1200.000	JN
	UNKNOWNKETONE	17.93	480.000	J
	UNKNOWN	18.03	540.000	J
	UNKNOWN	18.21	470.000	J
	UNKNOWN	18.36	2600.000	J

Semivolatile Analysis Data - ECND7
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	1.17	530.000	J
	UNKNOWN	1.95	1000.000	J
	UNKNOWN	2.14	240.000	J
90-02-8	BENZALDEHYDE,2-HYDROXY-	2.61	300.000	JN
	UNKNOWN	2.66	3600.000	BJ
103-82-2	BENZENEACETICACID	3.63	320.000	JN
872-05-9	1-DECENE	4.85	950.000	JN
2091-29-4	9-HEXADECENOICACID	8.51	290.000	JN
	UNKNOWNHYDROCARBON	8.93	500.000	J
112-80-1	OLEICACID	9.92	660.000	JN
	UNKNOWNAMIDE	10.07	440.000	J
	UNKNOWNAMIDE	11.49	3800.000	J
112-85-6	DOCOSANOICACID	12.80	390.000	JN
	UNKNOWNAMIDE	14.09	400.000	J
	UNKNOWNKETONE	15.96	240.000	J
	UNKNOWNHYDROCARBON	16.92	280.000	J
83-47-6	.GAMMA.-SITOSTEROL	17.00	2200.000	JN
	UNKNOWNPAH	17.17	280.000	J
	UNKNOWN	17.26	330.000	J
638-95-9	.ALPHA.-AMYRIN	17.40	220.000	JN
	UNKNOWN	17.66	630.000	J
	UNKNOWN	17.94	710.000	J
	UNKNOWN	18.03	570.000	J
	UNKNOWN	18.26	250.000	J
	UNKNOWN	18.37	3100.000	J

Semivolatile Analysis Data - ECND8
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	1.96	1800.000	J
	UNKNOWN	2.14	87.000	J
	UNKNOWN	3.35	170.000	J
	UNKNOWN	3.60	99.000	J
	UNKNOWN	4.65	100.000	J
872-05-9	1-DECENE	4.85	1000.000	JN
	UNKNOWNORGANICACID	8.50	100.000	J
	UNKNOWNAMIDE	8.67	290.000	J
	UNKNOWN	8.96	120.000	J
	UNKNOWN	9.91	210.000	J
	UNKNOWNAMIDE	10.05	480.000	J
	UNKNOWNAMIDE	11.50	4900.000	J
	UNKNOWNAMIDE	11.65	160.000	J
	UNKNOWN	14.77	130.000	J
	UNKNOWN	15.95	88.000	J
	UNKNOWN	16.54	91.000	J
83-47-6	.GAMMA.-SITOSTEROL	17.00	650.000	JN
638-95-9	.ALPHA.-AMYRIN	17.39	120.000	JN
1058-61-3	STIGMAST-4-EN-3-ONE	17.65	230.000	JN
	UNKNOWN	17.92	250.000	J
	UNKNOWNHYDROCARBON	18.03	380.000	J
	UNKNOWN	18.37	4400.000	J

Semivolatile Analysis Data - ECND9
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	1.32	210.000	J
111-46-6	ETHANOL,2,2'-OXYBIS-	2.19	300.000	JN
123-19-3	4-HEPTANONE	2.62	270.000	JN
	UNKNOWN	2.66	2800.000	BJ
	UNKNOWNHYDROCARBON	3.56	140.000	J
	UNKNOWN	3.64	150.000	J
	UNKNOWN	4.66	290.000	J
56666-87-6	BENZENE,1-(2,2-DIMETHYLPROPYL)-2,4,5-TR	4.79	170.000	JN
	UNKNOWN	5.04	130.000	J
	UNKNOWNPAH	5.25	120.000	J
334-48-5	DECANOICACID	5.48	130.000	JN
	UNKNOWN	6.23	110.000	J
	UNKNOWNAMIDE	8.67	320.000	J
	UNKNOWN	8.96	170.000	J
	UNKNOWNORGANICACID	9.93	210.000	J
	UNKNOWNAMIDE	10.07	380.000	J
	UNKNOWNAMIDE	10.74	140.000	J
	UNKNOWNAMIDE	11.50	3600.000	J
	UNKNOWN	11.54	750.000	J
	UNKNOWNAMIDE	11.66	140.000	J
	UNKNOWNAMIDE	14.09	560.000	J
	UNKNOWN	15.58	140.000	J
	UNKNOWN	16.56	100.000	J
83-47-6	.GAMMA.-SITOSTEROL	17.01	120.000	JN
	UNKNOWN	18.37	3600.000	J

Semivolatile Analysis Data - ECTJ3
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWNALDOLCONDENSATE	1.11	5100.000	AJ
	UNKNOWN	2.66	2100.000	BJ
103-82-2	BENZENEACETICACID	3.63	440.000	JN
	UNKNOWN	4.66	200.000	J
	UNKNOWN	4.74	280.000	J
872-05-9	1-DECENE	4.84	680.000	JN
	UNKNOWNORGANICACID	8.44	200.000	J
109-29-5	OXACYCLOHEPTADECAN-2-ONE	8.53	640.000	JN
60-33-3	9,12-OCTADECADIENOICACID(Z,Z)-	9.94	2800.000	JN
112-80-1	OLEICACID	9.97	2400.000	JN
57-11-4	OCTADECANOICACID	10.13	1600.000	JN
143-28-2	OLEYLALCOHOL	10.80	500.000	JN
	UNKNOWNAMIDE	11.51	4700.000	J
123-95-5	OCTADECANOICACID,BUTYLESTER	11.62	840.000	JN
57-88-5	CHOLESTEROL	15.96	480.000	JN
	UNKNOWN	16.56	200.000	J
	UNKNOWN	16.93	210.000	J
83-47-6	.GAMMA.-SITOSTEROL	17.01	730.000	JN
	UNKNOWN	17.07	200.000	J
	UNKNOWNPAH	17.17	230.000	J
	UNKNOWN	17.66	270.000	J
	UNKNOWN	17.93	270.000	J
	UNKNOWN	18.04	520.000	J
	UNKNOWN	18.37	3400.000	J
	UNKNOWNHYDROCARBON	18.87	230.000	J

Semivolatile Analysis Data - ECTJ4
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWNALDOLCONDENSATE	1.11	6000.000	AJ
	UNKNOWN	1.32	170.000	J
111-46-6	ETHANOL,2,2'-OXYBIS-	2.19	160.000	JN
	UNKNOWN	2.66	2800.000	BJ
	UNKNOWN	3.35	130.000	J
	UNKNOWN	3.60	93.000	J
	UNKNOWN	3.64	140.000	J
	UNKNOWN	4.06	120.000	J
	UNKNOWN	4.66	200.000	J
56666-87-6	BENZENE,1-(2,2-DIMETHYLPROPYL)-2,4,5-TR	4.79	90.000	JN
872-05-9	1-DECENE	4.85	640.000	JN
	UNKNOWNKETONE	7.65	100.000	J
	UNKNOWNAMIDE	8.67	290.000	J
	UNKNOWN	8.96	130.000	J
	UNKNOWNAMIDE	9.94	91.000	J
	UNKNOWNAMIDE	10.06	430.000	J
	UNKNOWNAMIDE	10.73	94.000	J
	UNKNOWNAMIDE	11.51	6400.000	J
	UNKNOWNAMIDE	11.66	210.000	J
	UNKNOWN	11.86	100.000	J
	UNKNOWNAMIDE	12.82	91.000	J
	UNKNOWNAMIDE	14.09	750.000	J
	UNKNOWN	15.58	98.000	J
	UNKNOWN	18.38	3500.000	J

Semivolatile Analysis Data - ECTJ5
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	1.31	140.000	J
	UNKNOWN	2.66	2600.000	BJ
	UNKNOWN	2.94	90.000	J
	UNKNOWN	3.35	130.000	J
	UNKNOWN	3.60	79.000	J
	UNKNOWN	4.06	90.000	J
569-41-5	NAPHTHALENE,1,8-DIMETHYL-	4.56	83.000	JN
	UNKNOWN	4.65	140.000	J
872-05-9	1-DECENE	4.85	860.000	JN
605-39-0	2,2'-DIMETHYLBIPHENYL	5.26	100.000	JN
	UNKNOWNAMIDE	8.67	220.000	J
	UNKNOWN	8.96	190.000	J
872-05-9	1-DECENE	9.92	100.000	JN
	UNKNOWNAMIDE	10.06	290.000	J
	UNKNOWNAMIDE	11.50	3300.000	J
	UNKNOWNAMIDE	11.53	720.000	J
123-95-5	OCTADECANOICACID,BUTYLESTER	11.63	390.000	JN
	UNKNOWNAMIDE	14.09	500.000	J
83-47-6	.GAMMA.-SITOSTEROL	17.00	150.000	JN
	UNKNOWN	17.65	110.000	J
	UNKNOWN	17.93	130.000	J
	UNKNOWNHYDROCARBON	18.03	140.000	J
	UNKNOWN	18.37	3800.000	J

Semivolatile Analysis Data - ECTJ6
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	1.32	150.000	J
	UNKNOWN	1.96	2000.000	J
	UNKNOWN	2.14	120.000	J
111-46-6	ETHANOL,2,2'-OXYBIS-	2.21	550.000	JN
	UNKNOWN	2.66	2200.000	BJ
	UNKNOWN	2.94	140.000	J
	UNKNOWN	3.35	150.000	J
95-16-9	BENZOTHIAZOLE	3.50	100.000	JN
	UNKNOWN	3.64	160.000	J
	UNKNOWN	4.66	180.000	J
872-05-9	1-DECENE	4.85	850.000	JN
611-61-0	1,1'-BIPHENYL,2,4'-DIMETHYL-	5.26	110.000	JN
	UNKNOWNAMIDE	8.67	330.000	J
	UNKNOWN	8.96	180.000	J
112-80-1	OLEICACID	9.91	120.000	JN
	UNKNOWNAMIDE	10.05	330.000	J
	UNKNOWNAMIDE	11.51	5000.000	J
123-95-5	OCTADECANOICACID,BUTYLESTER	11.63	430.000	JN
78-51-3	ETHANOL,2-BUTOXY-,PHOSPHATE(3:1)	11.86	360.000	JN
	UNKNOWN	15.56	100.000	J
	UNKNOWNHYDROCARBON	18.04	230.000	J
	UNKNOWN	18.37	3000.000	J

Semivolatile Analysis Data - ECTJ7
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	2.14	290.000	J
	UNKNOWN	2.66	2100.000	BJ
872-05-9	1-DECENE	4.84	650.000	JN
	UNKNOWNHYDROCARBON	6.45	820.000	J
	UNKNOWNAMIDE	8.67	280.000	J
	UNKNOWN	8.96	240.000	J
60-33-3	9,12-OCTADECADIENOICACID(Z,Z)-	9.88	150.000	JN
17351-34-7	14-PENTADECENOICACID	9.92	360.000	JN
	UNKNOWNAMIDE	10.06	270.000	J
57-11-4	OCTADECANOICACID	10.10	150.000	JN
	UNKNOWNAMIDE	11.50	4000.000	J
123-95-5	OCTADECANOICACID,BUTYLESTER	11.63	220.000	JN
	UNKNOWN	12.24	240.000	J
99-18-3	BENZENEACETONITRILE,.ALPHA.-(.BETA.-D-G	12.44	390.000	JN
	UNKNOWN	15.96	120.000	J
	UNKNOWNPAH	16.55	350.000	J
489-29-2	1H-CYCLOPROPA[A]NAPHTHALENE,1A,2,3,3A,4	16.71	210.000	JN
	UNKNOWN	16.93	130.000	J
83-47-6	.GAMMA.-SITOSTEROL	17.01	1800.000	JN
	UNKNOWN	17.17	240.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	17.66	240.000	JN
	UNKNOWN	17.93	190.000	J
	UNKNOWN	18.04	360.000	J
	UNKNOWN	18.37	3200.000	J

Semivolatile Analysis Data - ECTJ8
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
.-46-6	ETHANOL,2,2'-OXYBIS-	2.20	210.000	JN
872-05-9	1-DECENE	4.85	910.000	JN
	UNKNOWN	6.52	180.000	J
832-64-4	PHENANTHRENE,4-METHYL-	8.07	180.000	JN
	UNKNOWNAMIDE	8.68	320.000	J
	UNKNOWNORGANICACID	9.93	220.000	J
57-11-4	OCTADECANOICACID	10.10	180.000	JN
	UNKNOWNAMIDE	11.51	2500.000	J
78-51-3	ETHANOL,2-BUTOXY-,PHOSPHATE(3:1)	11.88	200.000	JN
	UNKNOWNPAH	14.23	210.000	J
	UNKNOWN	14.36	180.000	J
192-97-2	BENZO[E]PYRENE	14.48	430.000	JN
	UNKNOWN	14.84	300.000	J
	UNKNOWNPHTHALATE	14.98	210.000	J
	UNKNOWNPAH	15.16	240.000	J
	UNKNOWN	15.22	170.000	J
	UNKNOWN	15.43	180.000	J
53584-60-4	28-NOR-17.ALPHA.(H)-HOPANE	15.59	190.000	JN
	UNKNOWN	15.72	180.000	J
	UNKNOWN	16.05	310.000	J
83-47-6	.GAMMA.-SITOSTEROL	17.02	440.000	JN
1058-61-3	STIGMAST-4-EN-3-ONE	17.68	190.000	JN
	UNKNOWN	18.05	310.000	J
	UNKNOWN	18.39	1700.000	J
	UNKNOWN	18.83	180.000	J

Semivolatile Analysis Data - EZB39
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	2.14	300.000	J
111-46-6	ETHANOL,2,2'-OXYBIS-	2.22	480.000	JN
	UNKNOWN	2.67	2500.000	BJ
	UNKNOWNORGANICACID	8.45	300.000	J
	UNKNOWNAMIDE	8.69	390.000	J
	UNKNOWNHYDROCARBON	8.94	590.000	J
57-11-4	OCTADECANOICACID	10.11	330.000	JN
50-29-3	CHLOROPHENOTHANE	11.42	520.000	JN
	UNKNOWNAMIDE	11.51	3800.000	J
78-51-3	ETHANOL,2-BUTOXY-,PHOSPHATE(3:1)	11.87	650.000	JN
112-85-6	DOCOSANOICACID	12.82	310.000	JN
7616-22-0	.GAMMA.-TOCOPHEROL	15.63	280.000	JN
	UNKNOWNHYDROCARBON	15.89	460.000	J
	UNKNOWNKETONE	15.96	540.000	J
59-02-9	VITAMINE	16.07	420.000	JN
83-48-7	STIGMASTEROL	16.73	450.000	JN
83-47-6	.GAMMA.-SITOSTEROL	17.02	2500.000	JN
	UNKNOWNPAH	17.18	330.000	J
	UNKNOWN	17.28	400.000	J
559-70-6	.BETA.-AMYRIN	17.42	440.000	JN
	UNKNOWN	17.48	380.000	J
1058-61-3	STIGMAST-4-EN-3-ONE	17.68	930.000	JN
	UNKNOWN	17.95	700.000	J
	UNKNOWNHYDROCARBON	18.06	940.000	J
	UNKNOWN	18.23	310.000	J
	UNKNOWN	18.38	2700.000	J

Semivolatile Analysis Data - EZB41
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	2.67	3400.000	BJ
2091-29-4	9-HEXADECENOICACID	8.45	390.000	JN
2091-29-4	9-HEXADECENOICACID	8.53	330.000	JN
	UNKNOWNHYDROCARBON	8.95	660.000	J
112-80-1	OLEICACID	9.94	670.000	JN
112-80-1	OLEICACID	9.97	400.000	JN
57-11-4	OCTADECANOICACID	10.11	650.000	JN
	UNKNOWNAMIDE	11.51	4400.000	J
	UNKNOWNAMIDE	11.54	940.000	J
	UNKNOWN	11.87	460.000	J
6971-40-0	17-PENTATRIACONTENE	12.34	480.000	JN
112-85-6	DOCOSANOICACID	12.82	330.000	JN
1599-67-3	1-DOCOSENE	13.60	850.000	JN
	UNKNOWNAMIDE	14.10	500.000	J
59-02-9	VITAMINE	16.06	370.000	JN
	UNKNOWN	16.51	330.000	J
83-48-7	STIGMASTEROL	16.72	370.000	JN
83-47-6	.GAMMA.-SITOSTEROL	17.02	3000.000	JN
	UNKNOWN	17.44	360.000	J
	UNKNOWN	17.63	1500.000	J
	UNKNOWN	17.67	480.000	J
	UNKNOWNHYDROCARBON	17.94	2400.000	J
	UNKNOWNHYDROCARBON	18.06	1500.000	J
	UNKNOWN	18.38	3100.000	J
	UNKNOWN	19.56	1000.000	J

Semivolatile Analysis Data - EZB42
Tentatively Identified Compounds

CASE NO: 27323 LABORATORY: SWL-TULSA
SDG NO: EBYJ9

CAS NUMBER	COMPOUND NAME	RT	ESTIMATED CONCENTRATION	Q
	UNKNOWN	2.09	2700.000	BJ
	UNKNOWN	2.67	2600.000	BJ
	UNKNOWN	2.71	1100.000	J
	UNKNOWN	4.11	610.000	J
27322-34-5	BENZENE,TRIS(1-METHYLETHYL)-	4.32	1200.000	JN
	UNKNOWN	4.36	1500.000	J
25246-27-9	-CYCLOPROP[]AZULENE,DECAHYDRO--	4.49	570.000	JN
	UNKNOWNHYDROCARBON	8.96	580.000	J
	UNKNOWN	9.46	1000.000	J
57-11-4	OCTADECANOICACID	10.11	780.000	JN
	UNKNOWNAMIDE	11.51	4600.000	J
123-95-5	OCTADECANOICACID,BUTYLESTER	11.64	960.000	JN
6765-39-5	1-HEPTADECENE	12.35	650.000	JN
112-85-6	DOCOSANOICACID	12.83	740.000	JN
7616-22-0	.GAMMA.-TOCOPHEROL	15.63	650.000	JN
59-02-9	VITAMINE	16.07	1100.000	JN
83-48-7	STIGMASTEROL	16.73	870.000	JN
83-47-6	.GAMMA.-SITOSTEROL	17.04	6400.000	JN
	UNKNOWNPAH	17.19	2000.000	J
5945-53-9	D:C-FRIEDOOLEANAN-3-ONE	17.30	2600.000	JN
638-95-9	.ALPHA.-AMYRIN	17.43	3200.000	JN
1058-61-3	STIGMAST-4-EN-3-ONE	17.69	1500.000	JN
	UNKNOWN	17.79	750.000	J
	UNKNOWN	17.95	1900.000	J
	UNKNOWNHYDROCARBON	18.07	1600.000	J
	UNKNOWN	18.22	610.000	J
	UNKNOWN	18.40	4600.000	J

Analytical Results (Qualified Data)

Case # 27323
Site PLYMOUTH/ HAGGERTY
Lab SWOK
Reviewer S Tobin
Date 10/18/99

Number of Soil Samples 14
Number of Water Samples 6

Sample Number	ECTJ9		ECTK0		ECTK1		ECTK2		ECTK2MS	
Sampling Location	SW1		SW2		SW2D		SW3		SW3	
Matrix	Water		Water		Water		Water		Water	
Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	11 40		10 35		10 35		13 30		13 30	
%Moisture	N/A		N/A		N/A		N/A		N/A	
pH										
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
CHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
BROMOMETHANE	10	U	10	U	10	U	10	UJ	10	U
VINYL CHLORIDE	10	U	10	U	10	U	10	U	10	U
CHLOROETHANE	10	U	10	U	10	U	10	UJ	10	U
METHYLENE CHLORIDE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
ACETONE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
CARBON DISULFIDE	10	U	10	U	10	U	10	U	10	U
1,1-DICHLOROETHENE	10	U	10	U	10	U	10	UJ	37	
1,1-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TOTAL 1,2-DICHLOROETHENE	10	U	10	U	10	U	10	U	10	U
CHLOROFORM	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
2-BUTANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
1,1,1-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10	U
BROMODICHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROPROPANE	10	U	10	U	10	U	10	U	10	U
CIS-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
TRICHLOROETHENE	10	U	10	U	10	U	10	U	44	
DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
BENZENE	10	U	10	U	10	U	10	U	50	
TRANS-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
BROMOFORM	10	U	10	U	10	U	10	U	10	U
4-METHYL-2-PENTANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
2-HEXANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
TETRACHLOROETHENE	10	U	10	U	10	U	10	U	10	U
1,1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TOLUENE	10	U	10	U	10	U	10	U	47	
CHLOROBENZENE	10	U	10	U	10	U	10	U	48	
ETHYLBENZENE	10	U	10	U	10	U	10	U	10	U
STYRENE	10	U	10	U	10	U	10	U	10	U
XYLENE (TOTAL)	10	U	10	U	10	U	10	U	10	U

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer	S Tobin		
Date	10/18/99		

Sample Number	ECTK2MSD		ECTK3		ECTK4		VHBLK1		VBLK1	
Sampling Location	SW3		SW4		FB1					
Matrix	Water		Water		Water		Water		Water	
Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled	08/24/1999		08/24/1999		08/24/1999					
Time Sampled	13 30		15 05		14 15					
%Moisture	N/A		N/A		N/A		N/A		N/A	
pH										
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
CHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
BROMOMETHANE	10	U	10	U	10	U	10	UJ	10	U
VINYL CHLORIDE	10	U	10	U	10	U	10	U	10	U
CHLOROETHANE	10	U	10	U	10	U	10	UJ	10	U
METHYLENE CHLORIDE	10	UJ	10	UJ	10	UJ	10	UJ	7	J
ACETONE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
CARBON DISULFIDE	10	U	10	U	10	U	10	U	10	U
1,1-DICHLOROETHENE	43		10	U	10	U	10	U	10	U
1,1-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
TOTAL 1,2-DICHLOROETHENE	10	U	10	U	10	U	10	U	10	U
CHLOROFORM	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
2-BUTANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
1,1,1-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
CARBON TETRACHLORIDE	10	U	10	U	10	U	10	U	10	U
BROMODICHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,2-DICHLOROPROPANE	10	U	10	U	10	U	10	U	10	U
CIS-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
TRICHLOROETHENE	43		10	U	10	U	10	U	10	U
DIBROMOCHLOROMETHANE	10	U	10	U	10	U	10	U	10	U
1,1,2-TRICHLOROETHANE	10	U	10	U	10	U	10	U	10	U
BENZENE	49		10	U	10	U	10	U	10	U
TRANS-1,3-DICHLOROPROPENE	10	U	10	U	10	U	10	U	10	U
BROMOFORM	10	U	10	U	10	U	10	U	10	U
4-METHYL-2-PENTANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
2-HEXANONE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
TETRACHLOROETHENE	10	U	10	U	10	U	10	U	10	U
1,1,2,2-TETRACHLOROETHANE	10	U	10	U	10	U	10	U	3	J
TOLUENE	47		10	U	10	U	10	U	10	U
CHLOROBENZENE	47		10	U	10	U	10	U	10	U
ETHYLBENZENE	10	U	10	U	10	U	10	U	10	U
STYRENE	10	U	10	U	10	U	10	U	10	U
XYLENE (TOTAL)	10	U	10	U	10	U	10	U	10	U

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer	S Tobin		
Date	10/18/99		

Sample Number	VBLK2									
Sampling Location										
Matrix	Water									
Units	ug/L									
Date Sampled										
Time Sampled										
%Moisture	N/A									
pH										
Dilution Factor	1 0									
Volatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
CHLOROMETHANE	10	U								
BROMOMETHANE	10	UJ								
VINYL CHLORIDE	10	U								
CHLOROETHANE	10	UJ								
METHYLENE CHLORIDE	10	UJ								
ACETONE	10	UJ								
CARBON DISULFIDE	10	U								
1,1-DICHLOROETHENE	10	U								
1,1-DICHLOROETHANE	10	U								
TOTAL 1,2-DICHLOROETHENE	10	U								
CHLOROFORM	10	U								
1,2-DICHLOROETHANE	10	U								
2-BUTANONE	10	UJ								
1,1,1-TRICHLOROETHANE	10	U								
CARBON TETRACHLORIDE	10	U								
BROMODICHLOROMETHANE	10	U								
1,2-DICHLOROPROPANE	10	U								
CIS-1,3-DICHLOROPROPENE	10	U								
TRICHLOROETHENE	10	U								
DIBROMOCHLOROMETHANE	10	U								
1,1,2-TRICHLOROETHANE	10	U								
BENZENE	10	U								
TRANS-1,3-DICHLOROPROPENE	10	U								
BROMOFORM	10	U								
4-METHYL-2-PENTANONE	10	UJ								
2-HEXANONE	10	UJ								
TETRACHLOROETHENE	10	U								
1,1,2,2-TETRACHLOROETHANE	10	U								
TOLUENE	10	U								
CHLOROBENZENE	10	U								
ETHYLBENZENE	10	U								
STYRENE	10	U								
XYLENE (TOTAL)	10	U								

Analytical Results (Qualified Data)

Case # 27323
Site · PLYMOUTH/ HAGGERTY
Lab. SWOK
Reviewer . S Tobin
Date 10/18/99

SDG . EBYJ9
Number of Soil Samples 14
Number of Water Samples . 6

Sample Number .	EBYJ9		EBYJ9RE		EBYK0		EBYK0RE		ECND7	
Sampling Location .	SS4		SS4		SS5		SS5		SB1	
Matrix ·	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled .	11 15		11 15		12 10		12 10		15 55	
%Moisture	18		18		14		14		19	
pH :	7.1		7 1		7 0		7 0		7 1	
Dilution Factor .	1 0		1 0		1 0		1 0		1 0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	390	U	400	UJ	380	U	340	UJ	400	U
BIS(2-CHLOROETHYL)ETHER	390	U	400	UJ	380	U	340	UJ	400	U
2-CHLOROPHENOL	390	U	400	UJ	380	U	340	UJ	400	U
1,3-DICHLOROBENZENE	390	U	400	UJ	380	U	340	UJ	400	U
1,4-DICHLOROBENZENE	390	U	400	UJ	380	U	340	UJ	400	U
1,2-DICHLOROBENZENE	390	U	400	UJ	380	U	340	UJ	400	U
2-METHYLPHENOL	390	U	400	UJ	380	U	340	UJ	400	U
2,2'-OXYBIS(1-CHLOROPROPANE)	390	U	400	UJ	380	U	340	UJ	400	U
4-METHYLPHENOL	390	U	400	UJ	380	U	340	UJ	400	U
N-NITROSO-DI-N-PROPYLAMINE	390	U	400	UJ	380	U	340	UJ	400	U
HEXACHLOROETHANE	390	U	400	UJ	380	U	340	UJ	400	U
NITROBENZENE	390	U	400	UJ	380	U	340	UJ	400	U
ISOPHORONE	390	U	400	UJ	380	U	340	UJ	400	U
2-NITROPHENOL	390	U	400	UJ	380	U	340	UJ	400	U
2,4-DIMETHYLPHENOL	390	U	400	UJ	380	U	340	UJ	400	U
BIS(2-CHLOROETHOXY)METHANE	390	U	400	UJ	380	U	340	UJ	400	U
2,4-DICHLOROPHENOL	390	U	400	UJ	380	U	340	UJ	400	U
1,2,4-TRICHLOROBENZENE	390	U	400	UJ	380	U	340	UJ	400	U
NAPHTHALENE	390	U	400	UJ	380	U	340	UJ	400	U
4-CHLOROANILINE	390	U	400	UJ	380	U	340	UJ	400	U
HEXACHLOROBUTADIENE	390	U	400	UJ	380	U	340	UJ	400	U
4-CHLORO-3-METHYLPHENOL	390	U	400	UJ	380	U	340	UJ	400	U
2-METHYLNAPHTHALENE	390	U	400	UJ	380	U	340	UJ	400	U
HEXACHLOROCYCLOPENTADIENE	390	U	400	UJ	380	U	340	UJ	400	U
2,4,6-TRICHLOROPHENOL	390	U	400	UJ	380	U	340	UJ	400	U
2,4,5-TRICHLOROPHENOL	980	U	1000	UJ	950	U	860	UJ	1000	U
2-CHLORONAPHTHALENE	390	U	400	UJ	380	U	340	UJ	400	U
2-NITROANILINE	980	U	1000	UJ	950	U	860	UJ	1000	U
DIMETHYLPHTHALATE	390	U	400	UJ	380	U	340	UJ	400	U
ACENAPHTHYLENE	390	U	400	UJ	380	U	340	UJ	400	U
2,6-DINITROTOLUENE	390	U	400	UJ	380	U	340	UJ	400	U
3-NITROANILINE	980	U	1000	UJ	950	U	860	UJ	1000	U
ACENAPHTHENE	390	U	400	UJ	380	U	340	UJ	400	U

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer	S Tobin		
Date	10/18/99		

Sample Number	EBYJ9		EBYJ9RE		EBYK0		EBYK0RE		ECND7	
Sampling Location	SS4		SS4		SS5		SS5		SB1	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	11 15		11 15		12 10		12 10		15 55	
%Moisture	18		18		14		14		19	
pH	7 1		7 1		7 0		7 0		7 1	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	980	U	1000	UJ	950	U	860	UJ	1000	U
4-NITROPHENOL	980	U	1000	UJ	950	U	860	UJ	1000	U
DIBENZOFURAN	390	U	400	UJ	380	U	340	UJ	400	U
2,4-DINITROTOLUENE	390	U	400	UJ	380	U	340	UJ	400	U
DIETHYLPHTHALATE	390	U	400	UJ	380	U	340	UJ	400	U
4-CHLOROPHENYL-PHENYLETHER	390	U	400	UJ	380	U	340	UJ	400	U
FLUORENE	390	U	400	UJ	380	U	340	UJ	400	U
4-NITROANILINE	980	U	1000	UJ	950	U	860	UJ	1000	U
4,6-DINITRO-2-METHYLPHENOL	980	U	1000	UJ	950	U	860	UJ	1000	U
N-NITROSODIPHENYLAMINE	390	U	400	UJ	380	U	340	UJ	400	U
4-BROMOPHENYL-PHENYLETHER	390	U	400	UJ	380	U	340	UJ	400	U
HEXACHLOROBENZENE	390	U	400	UJ	380	U	340	UJ	400	U
PENTACHLOROPHENOL	980	U	1000	UJ	950	U	860	UJ	1000	U
PHENANTHRENE	92	J	61	J	100	J	60	J	62	J
ANTHRACENE	390	U	400	UJ	23	J	340	UJ	400	U
CARBAZOLE	25	J	400	UJ	21	J	340	UJ	400	U
DI-N-BUTYLPHTHALATE	59	J	37	J	110	J	35	J	26	J
FLUORANTHENE	220	J	160	J	230	J	150	J	120	J
PYRENE	180	J	110	J	210	J	110	J	110	J
BUTYLBENZYLPHTHALATE	390	U	48	J	62	J	31	J	400	U
3,3'-DICHLOROBENZIDINE	390	U	400	UJ	380	U	340	UJ	400	U
BENZO(A)ANTHRACENE	82	J	62	J	96	J	55	J	51	J
CHRYSENE	140	J	100	J	140	J	86	J	82	J
BIS(2-ETHYLHEXYL)PHTHALATE	390	U	400	U	380	U	340	UJ	400	U
DI-N-OCTYLPHTHALATE	390	U	400	UJ	380	U	340	UJ	400	U
BENZO(B)FLUORANTHENE	130	J	94	J	150	J	93	J	130	J
BENZO(K)FLUORANTHENE	110	J	66	J	110	J	45	J	400	U
BENZO(A)PYRENE	100	J	83	J	120	J	72	J	58	J
INDENO(1,2,3-CD)PYRENE	98	J	58	J	110	J	54	J	64	J
DIBENZ(A,H)ANTHRACENE	390	U	400	UJ	380	U	340	UJ	400	U
BENZO(G,H,I)PERYLENE	100	J	80	J	110	J	65	J	66	J

Analytical Results (Qualified Data)

Case # 27323 SDG EBYJ9
Site PLYMOUTH/ HAGGERTY Number of Soil Samples . 14
Lab SWOK Number of Water Samples . 6
Reviewer S Tobin
Date 10/18/99

Sample Number	ECND7RE		ECND8		ECND8RE		ECND9		ECTJ3	
Sampling Location	SB1		SB2		SB2		SB3		SB5	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	15 55		15 35		15 35		15 20		10 45	
%Moisture	19		12		12		11		13	
pH	7 1		7 4		7 4		7 6		7 7	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	380	UJ	360	U	360	R	340	U	370	U
BIS(2-CHLOROETHYL)ETHER	380	UJ	360	U	360	UJ	340	U	370	U
2-CHLOROPHENOL	380	UJ	360	U	360	R	340	U	370	U
1,3-DICHLOROBENZENE	380	UJ	360	U	360	UJ	340	U	370	U
1,4-DICHLOROBENZENE	380	UJ	360	U	360	UJ	340	U	370	U
1,2-DICHLOROBENZENE	380	UJ	360	U	360	UJ	340	U	370	U
2-METHYLPHENOL	380	UJ	360	U	360	R	340	U	370	U
2,2'-OXYBIS(1-CHLOROPROPANE)	380	UJ	360	U	360	UJ	340	U	370	U
4-METHYLPHENOL	380	UJ	360	U	360	R	340	U	370	U
N-NITROSO-DI-N-PROPYLAMINE	380	UJ	360	U	360	UJ	340	U	370	U
HEXACHLOROETHANE	380	UJ	360	U	360	UJ	340	U	370	U
NITROBENZENE	380	UJ	360	U	360	UJ	340	U	370	U
ISOPHORONE	380	UJ	360	U	360	UJ	340	U	370	U
2-NITROPHENOL	380	UJ	360	U	360	R	340	U	370	U
2,4-DIMETHYLPHENOL	380	UJ	360	U	360	R	340	U	370	U
BIS(2-CHLOROETHOXY)METHANE	380	UJ	360	U	360	UJ	340	U	370	U
2,4-DICHLOROPHENOL	380	UJ	360	U	360	R	340	U	370	U
1,2,4-TRICHLOROBENZENE	380	UJ	360	U	360	UJ	340	U	370	U
NAPHTHALENE	380	UJ	360	U	360	UJ	340	U	370	U
4-CHLOROANILINE	380	UJ	360	U	360	UJ	340	U	370	U
HEXACHLOROBUTADIENE	380	UJ	360	U	360	UJ	340	U	370	U
4-CHLORO-3-METHYLPHENOL	380	UJ	360	U	360	R	340	U	370	U
2-METHYLNAPHTHALENE	380	UJ	360	U	360	UJ	50	J	370	U
HEXACHLOROCYCLOPENTADIENE	380	UJ	360	U	360	UJ	340	U	370	U
2,4,6-TRICHLOROPHENOL	380	UJ	360	U	360	R	340	U	370	U
2,4,5-TRICHLOROPHENOL	960	UJ	910	U	910	R	860	U	930	U
2-CHLORONAPHTHALENE	380	UJ	360	U	360	UJ	340	U	370	U
2-NITROANILINE	960	UJ	910	U	910	UJ	860	U	930	U
DIMETHYLPHTHALATE	380	UJ	360	U	360	UJ	340	U	370	U
ACENAPHTHYLENE	380	UJ	360	U	360	UJ	340	U	370	U
2,6-DINITROTOLUENE	380	UJ	360	U	360	UJ	340	U	370	U
3-NITROANILINE	960	UJ	910	U	910	UJ	860	U	930	U
ACENAPHTHENE	380	UJ	360	U	360	UJ	340	U	370	U

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer	S Tobin		
Date	10/18/99		

Sample Number	ECND7RE		ECND8		ECND8RE		ECND9		ECTJ3	
Sampling Location	SB1		SB2		SB2		SB3		SB5	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	15 55		15 35		15 35		15 20		10 45	
%Moisture	19		12		12		11		13	
pH	7 1		7 4		7.4		7 6		7 7	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	960	UJ	910	U	910	R	860	U	930	U
4-NITROPHENOL	960	UJ	910	U	910	R	860	U	930	U
DIBENZOFURAN	380	UJ	360	U	360	UJ	340	U	370	U
2,4-DINITROTOLUENE	380	UJ	360	U	360	UJ	340	U	370	U
DIETHYLPHTHALATE	380	UJ	360	U	360	UJ	340	U	370	U
4-CHLOROPHENYL-PHENYLETHER	380	UJ	360	U	360	UJ	340	U	370	U
FLUORENE	380	UJ	360	U	360	UJ	340	U	370	U
4-NITROANILINE	960	UJ	910	U	910	UJ	860	U	930	U
4,6-DINITRO-2-METHYLPHENOL	960	UJ	910	U	910	R	860	U	930	U
N-NITROSODIPHENYLAMINE	380	UJ	360	U	360	UJ	340	U	370	U
4-BROMOPHENYL-PHENYLETHER	380	UJ	360	U	360	UJ	340	U	370	U
HEXACHLOROBENZENE	380	UJ	360	U	360	UJ	340	U	370	U
PENTACHLOROPHENOL	960	UJ	910	U	910	R	860	U	930	U
PHENANTHRENE	38	J	28	J	360	UJ	39	J	38	J
ANTHRACENE	380	UJ	360	U	360	UJ	340	U	370	U
CARBAZOLE	380	UJ	360	U	360	UJ	340	U	370	U
DI-N-BUTYLPHTHALATE	32	J	37	J	360	UJ	24	J	220	J
FLUORANTHENE	92	J	46	J	360	UJ	340	U	53	J
PYRENE	69	J	43	J	360	UJ	340	U	57	J
BUTYLBENZYLPHTHALATE	380	UJ	360	U	360	UJ	340	U	370	U
3,3'-DICHLOROBENZIDINE	380	UJ	360	U	360	UJ	340	U	370	U
BENZO(A)ANTHRACENE	36	J	21	J	360	UJ	340	U	51	J
CHRYSENE	54	J	47	J	360	UJ	37	J	71	J
BIS(2-ETHYLHEXYL)PHTHALATE	380	UJ	360	U	360	UJ	340	U	540	J
DI-N-OCTYLPHTHALATE	380	UJ	360	U	360	UJ	340	U	370	U
BENZO(B)FLUORANTHENE	85	J	38	J	360	UJ	22	J	59	J
BENZO(K)FLUORANTHENE	380	UJ	19	J	360	UJ	340	U	53	J
BENZO(A)PYRENE	40	J	27	J	360	UJ	340	U	55	J
INDENO(1,2,3-CD)PYRENE	33	J	23	J	360	UJ	340	U	50	J
DIBENZ(A,H)ANTHRACENE	380	UJ	360	U	360	UJ	340	U	370	U
BENZO(G,H,I)PERYLENE	43	J	26	J	360	UJ	24	J	74	J

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer	S Tobin		
Date	10/18/99		

Sample Number	ECTJ3RE		ECTJ4		ECTJ4MS		ECTJ4MSD		ECTJ5	
Sampling Location	SB5		SB6		SB6		SB6		SB7	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	10 45		11 40		11 40		11 40		10 15	
%Moisture	13		13		13		13		12	
pH	7 7		7 7		7 7		7 7		7 9	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Semivolatile Compound	*Result*	*Flag*	*Result*	*Flag*	*Result*	*Flag*	*Result*	*Flag*	*Result*	*Flag*
PHENOL	350	UJ	380	U	2800		3200		360	U
BIS(2-CHLOROETHYL)ETHER	350	UJ	380	U	380	U	370	U	360	U
2-CHLOROPHENOL	350	UJ	380	U	3000		2800		360	U
1,3-DICHLOROBENZENE	350	UJ	380	U	380	U	370	U	360	U
1,4-DICHLOROBENZENE	350	UJ	380	U	2000	J	1700		360	U
1,2-DICHLOROBENZENE	350	UJ	380	U	380	U	370	U	360	U
2-METHYLPHENOL	350	UJ	380	U	380	U	370	U	360	U
2,2'-OXYBIS(1-CHLOROPROPANE)	350	UJ	380	U	380	U	370	U	360	U
4-METHYLPHENOL	350	UJ	380	U	380	U	370	U	360	U
N-NITROSO-DI-N-PROPYLAMINE	350	UJ	380	U	2200	J	2400		360	U
HEXACHLOROETHANE	350	UJ	380	U	380	U	370	U	360	U
NITROBENZENE	350	UJ	380	U	380	U	370	U	360	U
ISOPHORONE	350	UJ	380	U	380	U	370	U	360	U
2-NITROPHENOL	350	UJ	380	U	380	U	370	U	360	U
2,4-DIMETHYLPHENOL	350	UJ	380	U	380	U	370	U	360	U
BIS(2-CHLOROETHOXY)METHANE	350	UJ	380	U	380	U	370	U	360	U
2,4-DICHLOROPHENOL	350	UJ	380	U	380	U	370	U	360	U
1,2,4-TRICHLOROBENZENE	350	UJ	380	U	2300	J	2200		360	U
NAPHTHALENE	110	J	380	U	380	U	370	U	360	U
4-CHLOROANILINE	350	UJ	380	U	380	U	370	U	360	U
HEXACHLOROBUTADIENE	350	UJ	380	U	380	U	370	U	360	U
4-CHLORO-3-METHYLPHENOL	350	UJ	380	U	3100		3800		360	U
2-METHYLNAPHTHALENE	33	J	380	U	41	J	370	U	360	U
HEXACHLOROCYCLOPENTADIENE	350	UJ	380	U	380	U	370	U	360	U
2,4,6-TRICHLOROPHENOL	350	UJ	380	U	380	U	370	U	360	U
2,4,5-TRICHLOROPHENOL	880	UJ	950	U	940	U	930	U	900	U
2-CHLORONAPHTHALENE	350	UJ	380	U	380	U	370	U	360	U
2-NITROANILINE	880	UJ	950	U	940	U	930	U	900	U
DIMETHYLPHTHALATE	350	UJ	380	U	380	U	370	U	360	U
ACENAPHTHYLENE	350	UJ	380	U	380	U	370	U	360	U
2,6-DINITROTOLUENE	350	UJ	380	U	380	U	370	U	360	U
3-NITROANILINE	880	UJ	950	U	940	U	930	U	900	U
ACENAPHTHENE	320	J	380	U	2300	J	2100		360	U

Analytical Results (Qualified Data)

Case # 27323 SDG EBYJ9
Site PLYMOUTH/ HAGGERTY
Lab SWOK
Reviewer S Tobin
Date 10/18/99

Number of Soil Samples 14
Number of Water Samples 6

Sample Number	ECTJ3RE		ECTJ4		ECTJ4MS		ECTJ4MSD		ECTJ5	
Sampling Location	SB5		SB6		SB6		SB6		SB7	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	10 45		11 40		11 40		11 40		10 15	
%Moisture	13		13		13		13		12	
pH	7 7		7 7		7 7		7 7		7 9	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	880	UJ	950	U	940	U	930	U	900	U
4-NITROPHENOL	880	UJ	950	UJ	3700		3400		900	U
DIBENZOFURAN	150	J	380	U	380	U	370	U	360	U
2,4-DINITROTOLUENE	350	UJ	380	U	2200	J	2000		360	U
DIETHYLPHTHALATE	20	J	380	U	380	U	370	U	360	U
4-CHLOROPHENYL-PHENYLETHER	350	UJ	380	U	380	U	370	U	360	U
FLUORENE	240	J	380	U	380	U	370	U	360	U
4-NITROANILINE	880	UJ	950	U	940	U	930	U	900	U
4,6-DINITRO-2-METHYLPHENOL	880	UJ	950	U	940	U	930	U	900	U
N-NITROSODIPHENYLAMINE	350	UJ	380	U	380	U	370	U	360	U
4-BROMOPHENYL-PHENYLETHER	350	UJ	380	U	380	U	370	U	360	U
HEXACHLOROBENZENE	350	UJ	380	U	380	U	370	U	360	U
PENTACHLOROPHENOL	880	UJ	950	U	1800		1700		900	U
PHENANTHRENE	2000	J	25	J	42	J	29	J	360	U
ANTHRACENE	600	J	380	U	380	U	370	U	360	U
CARBAZOLE	340	J	380	U	380	U	370	U	360	U
DI-N-BUTYLPHTHALATE	36	J	24	J	31	J	28	J	26	J
FLUORANTHENE	2300	J	380	U	380	U	370	U	360	U
PYRENE	1900	J	380	U	2600	J	2400		360	U
BUTYLBENZYLPHTHALATE	32	J	380	U	380	U	370	U	360	U
3,3'-DICHLOROBENZIDINE	350	UJ	380	U	380	U	370	U	360	U
BENZO(A)ANTHRACENE	1000	J	380	U	380	U	370	U	360	U
CHRYSENE	960	J	30	J	35	J	30	J	19	J
BIS(2-ETHYLHEXYL)PHTHALATE	350	UJ	380	U	380	U	370	U	360	U
DI-N-OCTYLPHTHALATE	350	UJ	380	U	380	U	370	U	360	U
BENZO(B)FLUORANTHENE	900	J	380	U	380	U	370	U	360	U
BENZO(K)FLUORANTHENE	560	J	380	U	380	U	370	U	360	U
BENZO(A)PYRENE	920	J	380	U	22	J	19	J	360	U
INDENO(1,2,3-CD)PYRENE	520	J	380	U	380	U	370	U	360	U
DIBENZ(A,H)ANTHRACENE	250	J	380	U	380	U	370	U	360	U
BENZO(G,H,I)PERYLENE	540	J	24	J	31	J	31	J	360	U

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer	S Tobin		
Date	10/18/99		

Sample Number	ECTJ6		ECTJ7		ECTJ8		EZB39		EZB41	
Sampling Location	SB8		SB9		SB10		SS1		SS2	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	14 30		14 15		14 35		11 00		11 05	
%Moisture	10		11		6		11		27	
pH	7 9		7 8		7 6		7 6		7 4	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	350	U	360	U	340	U	360	U	440	U
BIS(2-CHLOROETHYL)ETHER	350	U	360	U	340	U	360	U	440	U
2-CHLOROPHENOL	350	U	360	U	340	U	360	U	440	U
1,3-DICHLOROBENZENE	350	U	360	U	340	U	360	U	440	U
1,4-DICHLOROBENZENE	350	U	360	U	340	U	360	U	440	U
1,2-DICHLOROBENZENE	350	U	360	U	340	U	360	U	440	U
2-METHYLPHENOL	350	U	360	U	340	U	360	U	440	U
2,2'-OXYBIS(1-CHLOROPROPANE)	350	U	360	U	340	U	360	U	440	U
4-METHYLPHENOL	350	U	360	U	340	U	360	U	440	U
N-NITROSO-DI-N-PROPYLAMINE	350	U	360	U	340	U	360	U	440	U
HEXACHLOROETHANE	350	U	360	U	340	U	360	U	440	U
NITROBENZENE	350	U	360	U	340	U	360	U	440	U
ISOPHORONE	350	U	360	U	340	U	360	U	440	U
2-NITROPHENOL	350	U	360	U	340	U	360	U	440	U
2,4-DIMETHYLPHENOL	350	U	360	U	340	U	360	U	440	U
BIS(2-CHLOROETHOXY)METHANE	350	U	360	U	340	U	360	U	440	U
2,4-DICHLOROPHENOL	350	U	360	U	340	U	360	U	440	U
1,2,4-TRICHLOROBENZENE	350	U	360	U	340	U	360	U	440	U
NAPHTHALENE	350	U	360	U	56	J	28	J	440	U
4-CHLOROANILINE	350	U	360	U	340	U	360	U	440	U
HEXACHLOROBUTADIENE	350	U	360	U	340	U	360	U	440	U
4-CHLORO-3-METHYLPHENOL	350	U	360	U	340	U	360	U	440	U
2-METHYLNAPHTHALENE	350	U	360	U	82	J	33	J	440	U
HEXACHLOROCYCLOPENTADIENE	350	U	360	U	340	U	360	U	440	U
2,4,6-TRICHLOROPHENOL	350	U	360	U	340	U	360	U	440	U
2,4,5-TRICHLOROPHENOL	890	U	920	U	860	U	890	U	1100	U
2-CHLORONAPHTHALENE	350	U	360	U	340	U	360	U	440	U
2-NITROANILINE	890	U	920	U	860	U	890	U	1100	U
DIMETHYLPHTHALATE	350	U	360	U	340	U	360	U	440	U
ACENAPHTHYLENE	350	U	360	U	81	J	43	J	440	U
2,6-DINITROTOLUENE	350	U	360	U	340	U	360	U	440	U
3-NITROANILINE	890	U	920	U	860	U	890	U	1100	U
ACENAPHTHENE	350	U	360	U	340	U	360	U	440	U

Analytical Results (Qualified Data)

Case # 27323
Site PLYMOUTH/ HAGGERTY
Lab SWOK
Reviewer S Tobin
Date 10/18/99
SDG EBYJ9

Number of Soil Samples 14
Number of Water Samples 6

Sample Number	ECTJ6		ECTJ7		ECTJ8		EZB39		EZB41	
Sampling Location	SB8		SB9		SB10		SS1		SS2	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	14 30		14 15		14 35		11 00		11 05	
%Moisture	10		11		6		11		27	
pH	7 9		7 8		7 6		7 6		7 4	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	890	U	920	U	860	U	890	U	1100	U
4-NITROPHENOL	890	U	920	U	860	U	890	U	1100	U
DIBENZOFURAN	350	U	360	U	27	J	360	U	440	U
2,4-DINITROTOLUENE	350	U	360	U	340	U	360	U	440	U
DIETHYLPHTHALATE	350	U	360	U	340	U	360	U	440	U
4-CHLOROPHENYL-PHENYLETHER	350	U	360	U	340	U	360	U	440	U
FLUORENE	350	U	360	U	340	U	360	U	440	U
4-NITROANILINE	890	U	920	U	860	U	890	U	1100	U
4,6-DINITRO-2-METHYLPHENOL	890	U	920	U	860	U	890	U	1100	U
N-NITROSODIPHENYLAMINE	350	U	360	U	340	U	360	U	440	U
4-BROMOPHENYL-PHENYLETHER	350	U	360	U	340	U	360	U	440	U
HEXACHLOROBENZENE	350	U	360	U	340	U	360	U	440	U
PENTACHLOROPHENOL	890	U	920	U	860	U	890	U	1100	U
PHENANTHRENE	22	J	360	U	330	J	160	J	68	J
ANTHRACENE	350	U	360	U	76	J	48	J	440	U
CARBAZOLE	350	U	360	U	33	J	28	J	440	U
DI-N-BUTYLPHTHALATE	40	J	64	J	120	J	48	J	36	J
FLUORANTHENE	350	U	19	J	460		290	J	140	J
PYRENE	350	U	20	J	430		260	J	130	J
BUTYLBENZYLPHTHALATE	350	U	360	U	340	U	360	U	440	U
3,3'-DICHLOROBENZIDINE	350	U	360	U	340	U	360	U	440	U
BENZO(A)ANTHRACENE	350	U	360	U	260	J	140	J	62	J
CHRYSENE	24	J	32	J	390		220	J	100	J
BIS(2-ETHYLHEXYL)PHTHALATE	350	U	360	U	340	U	360	U	440	U
DI-N-OCTYLPHTHALATE	350	U	360	U	64	J	360	U	440	U
BENZO(B)FLUORANTHENE	350	U	27	J	620		330	J	150	J
BENZO(K)FLUORANTHENE	350	U	19	J	340	U	360	U	440	U
BENZO(A)PYRENE	350	U	360	U	300	J	170	J	83	J
INDENO(1,2,3-CD)PYRENE	350	U	18	J	300	J	170	J	73	J
DIBENZ(A,H)ANTHRACENE	350	U	360	U	89	J	31	J	440	U
BENZO(G,H,I)PERYLENE	350	U	26	J	300	J	160	J	70	J

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer	S Tobin		
Date	10/18/99		

Sample Number	EZB42		SBLK2		SBLK3					
Sampling Location	SS3									
Matrix	Soil		Soil		Soil					
Units	ug/Kg		ug/Kg		ug/Kg					
Date Sampled	08/24/1999									
Time Sampled	11:10									
%Moisture	29		N/A		N/A					
pH	7 5		7 0		7 0					
Dilution Factor	1 0		1 0		1 0					
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	440	U	330	U	330	U				
BIS(2-CHLOROETHYL)ETHER	440	U	330	U	330	U				
2-CHLOROPHENOL	440	U	330	U	330	U				
1,3-DICHLOROBENZENE	440	U	330	U	330	U				
1,4-DICHLOROBENZENE	440	U	27	J	330	U				
1,2-DICHLOROBENZENE	440	U	330	U	330	U				
2-METHYLPHENOL	440	U	330	U	330	U				
2,2'-OXYBIS(1-CHLOROPROPANE)	440	U	330	U	330	U				
4-METHYLPHENOL	440	U	330	U	330	U				
N-NITROSO-DI-N-PROPYLAMINE	440	U	330	U	330	U				
HEXACHLOROETHANE	440	U	330	U	330	U				
NITROBENZENE	440	U	330	U	330	U				
ISOPHORONE	440	U	330	U	330	U				
2-NITROPHENOL	440	U	330	U	330	U				
2,4-DIMETHYLPHENOL	440	U	330	U	330	U				
BIS(2-CHLOROETHOXY)METHANE	440	U	330	U	330	U				
2,4-DICHLOROPHENOL	440	U	330	U	330	U				
1,2,4-TRICHLOROBENZENE	440	U	330	U	330	U				
NAPHTHALENE	440	U	330	U	330	U				
4-CHLOROANILINE	440	U	330	U	330	U				
HEXACHLOROBUTADIENE	440	U	330	U	330	U				
4-CHLORO-3-METHYLPHENOL	440	U	330	U	330	U				
2-METHYLNAPHTHALENE	440	U	330	U	330	U				
HEXACHLOROCYCLOPENTADIENE	440	U	330	U	330	UJ				
2,4,6-TRICHLOROPHENOL	440	U	330	U	330	U				
2,4,5-TRICHLOROPHENOL	1100	U	830	U	830	U				
2-CHLORONAPHTHALENE	440	U	330	U	330	U				
2-NITROANILINE	1100	U	830	U	830	U				
DIMETHYLPHTHALATE	440	U	330	U	330	U				
ACENAPHTHYLENE	27	J	330	U	330	U				
2,6-DINITROTOLUENE	440	U	330	U	330	U				
3-NITROANILINE	1100	U	830	U	830	U				
ACENAPHTHENE	440	U	330	U	330	U				

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer	S Tobin		
Date	10/18/99		

Sample Number	EZB42		SBLK2		SBLK3					
Sampling Location	SS3									
Matrix	Soil		Soil		Soil					
Units	ug/Kg		ug/Kg		ug/Kg					
Date Sampled	08/24/1999									
Time Sampled	11 10									
%Moisture	29		N/A		N/A					
pH	7 5		7 0		7 0					
Dilution Factor	1 0		1 0		1 0					
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	1100	U	830	U	830	UJ				
4-NITROPHENOL	1100	U	830	U	830	U				
DIBENZOFURAN	440	U	330	U	330	U				
2,4-DINITROTOLUENE	440	U	330	U	330	U				
DIETHYLPHTHALATE	440	U	330	U	330	U				
4-CHLOROPHENYL-PHENYLETHER	440	U	330	U	330	U				
FLUORENE	440	U	330	U	330	U				
4-NITROANILINE	1100	U	830	U	830	U				
4,6-DINITRO-2-METHYLPHENOL	1100	U	830	U	830	U				
N-NITROSODIPHENYLAMINE	440	U	330	U	330	U				
4-BROMOPHENYL-PHENYLETHER	440	U	330	U	330	U				
HEXACHLOROBENZENE	440	U	330	U	330	U				
PENTACHLOROPHENOL	1100	U	830	U	830	U				
PHENANTHRENE	130	J	330	U	330	U				
ANTHRACENE	39	J	330	U	330	U				
CARBAZOLE	440	U	330	U	330	U				
DI-N-BUTYLPHTHALATE	76	J	330	U	330	U				
FLUORANTHENE	250	J	330	U	330	U				
PYRENE	220	J	330	U	330	U				
BUTYLBENZYLPHTHALATE	440	U	330	U	330	U				
3,3'-DICHLOROBENZIDINE	440	U	330	U	330	U				
BENZO(A)ANTHRACENE	120	J	330	U	330	U				
CHRYSENE	160	J	330	U	330	U				
BIS(2-ETHYLHEXYL)PHTHALATE	440	U	32	J	19	J				
DI-N-OCTYLPHTHALATE	440	U	330	U	330	U				
BENZO(B)FLUORANTHENE	160	J	330	U	330	U				
BENZO(K)FLUORANTHENE	110	J	330	U	330	U				
BENZO(A)PYRENE	120	J	330	U	330	U				
INDENO(1,2,3-CD)PYRENE	120	J	330	U	330	U				
DIBENZ(A,H)ANTHRACENE	440	U	330	U	330	U				
BENZO(G,H,I)PERYLENE	110	J	330	U	330	U				

Analytical Results (Qualified Data)

Case # 27323 SDG EBYJ9
Site PLYMOUTH/ HAGGERTY Number of Soil Samples 14
Lab SWOK Number of Water Samples 6
Reviewer S Tobin
Date 10/18/99

Sample Number	ECTJ9		ECTK0		ECTK1		ECTK2		ECTK2MS	
Sampling Location	SW1		SW2		SW2D		SW3		SW3	
Matrix	Water		Water		Water		Water		Water	
Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	11 40		10 35		10 35		13 30		13 30	
%Moisture	N/A		N/A		N/A		N/A		N/A	
pH	7.7		7 2		7 2		7 6		7 6	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	10	U	10	U	10	U	10	U	50	
BIS(2-CHLOROETHYL)ETHER	10	U	10	U	10	U	10	U	10	U
2-CHLOROPHENOL	10	U	10	U	10	U	10	U	52	
1,3-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
1,4-DICHLOROBENZENE	10	U	10	U	10	U	10	U	26	
1,2-DICHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
2-METHYLPHENOL	10	U	10	U	10	U	10	U	10	U
2,2'-OXYBIS(1-CHLOROPROPANE)	10	U	10	U	10	U	10	U	10	U
4-METHYLPHENOL	10	U	10	U	10	U	10	U	10	U
N-NITROSO-DI-N-PROPYLAMINE	10	U	10	U	10	U	10	U	34	
HEXACHLOROETHANE	10	U	10	U	10	U	10	U	10	U
NITROBENZENE	10	U	10	U	10	U	10	U	10	U
ISOPHORONE	10	U	10	U	10	U	10	U	10	U
2-NITROPHENOL	10	U	10	U	10	U	10	U	10	U
2,4-DIMETHYLPHENOL	10	U	10	U	10	U	10	U	10	U
BIS(2-CHLOROETHOXY)METHANE	10	U	10	U	10	U	10	U	10	U
2,4-DICHLOROPHENOL	10	U	10	U	10	U	10	U	10	U
1,2,4-TRICHLOROBENZENE	10	U	10	U	10	U	10	U	30	
NAPHTHALENE	10	U	10	U	10	U	10	U	10	U
4-CHLOROANILINE	10	U	10	U	10	U	10	U	10	U
HEXACHLOROBUTADIENE	10	U	10	U	10	U	10	U	10	U
4-CHLORO-3-METHYLPHENOL	10	U	10	U	10	U	10	U	58	
2-METHYLNAPHTHALENE	10	U	10	U	10	U	10	U	10	U
HEXACHLOROCYCLOPENTADIENE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
2,4,6-TRICHLOROPHENOL	10	U	10	U	10	U	10	U	10	U
2,4,5-TRICHLOROPHENOL	25	U	25	U	25	U	25	U	25	U
2-CHLORONAPHTHALENE	10	U	10	U	10	U	10	U	10	U
2-NITROANILINE	25	U	25	U	25	U	25	U	25	U
DIMETHYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
ACENAPHTHYLENE	10	U	10	U	10	U	10	U	10	U
2,6-DINITROTOLUENE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
3-NITROANILINE	25	U	25	U	25	U	25	U	25	U
ACENAPHTHENE	10	U	10	U	10	U	10	U	35	

Analytical Results (Qualified Data)

Case # 27323 SDG · EBYJ9
Site PLYMOUTH/ HAGGERTY
Lab SWOK
Reviewer S Tobin
Date 10/18/99

Number of Soil Samples 14
Number of Water Samples 6

Sample Number	ECTJ9		ECTK0		ECTK1		ECTK2		ECTK2MS	
Sampling Location	SW1		SW2		SW2D		SW3		SW3	
Matrix	Water		Water		Water		Water		Water	
Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	11 40		10 35		10 35		13 30		13 30	
%Moisture	N/A		N/A		N/A		N/A		N/A	
pH	7 7		7 2		7 2		7 6		7 6	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	25	UJ	25	UJ	25	UJ	25	UJ	25	UJ
4-NITROPHENOL	25	U	25	U	25	U	25	U	66	
DIBENZOFURAN	10	U	10	U	10	U	10	U	10	U
2,4-DINITROTOLUENE	10	U	10	U	10	U	10	U	41	
DIETHYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
4-CHLOROPHENYL-PHENYLETHER	10	U	10	U	10	U	10	U	10	U
FLUORENE	10	U	10	U	10	U	10	U	10	U
4-NITROANILINE	25	U	25	U	25	U	25	U	25	U
4,6-DINITRO-2-METHYLPHENOL	25	UJ	25	UJ	25	UJ	25	UJ	25	UJ
N-NITROSODIPHENYLAMINE	10	U	10	U	10	U	10	U	10	U
4-BROMOPHENYL-PHENYLETHER	10	U	10	U	10	U	10	U	10	U
HEXACHLOROBENZENE	10	U	10	U	10	U	10	U	10	U
PENTACHLOROPHENOL	25	U	25	U	25	U	25	U	91	
PHENANTHRENE	10	U	10	U	10	U	10	U	10	U
ANTHRACENE	10	U	10	U	10	U	10	U	10	U
CARBAZOLE	10	U	10	U	10	U	10	U	10	U
DI-N-BUTYLPHTHALATE	10	U	10	U	10	U	10	U	10	U
FLUORANTHENE	10	U	10	U	10	U	10	U	10	U
PYRENE	10	U	10	U	10	U	10	U	56	
BUTYLBENZYLPHTHALATE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
3,3'-DICHLOROBENZIDINE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
BENZO(A)ANTHRACENE	10	U	10	U	10	U	10	U	10	U
CHRYSENE	10	U	10	U	10	U	10	U	10	U
BIS(2-ETHYLHEXYL)PHTHALATE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
DI-N-OCTYLPHTHALATE	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
BENZO(B)FLUORANTHENE	10	U	10	U	10	U	10	U	10	U
BENZO(K)FLUORANTHENE	10	U	10	U	10	U	10	U	10	U
BENZO(A)PYRENE	10	U	10	U	10	U	10	U	10	U
INDENO(1,2,3-CD)PYRENE	10	U	10	U	10	U	10	U	10	U
DIBENZ(A,H)ANTHRACENE	10	U	10	U	10	U	10	U	10	U
BENZO(G,H,I)PERYLENE	10	U	10	U	10	U	10	U	10	U

Analytical Results (Qualified Data)

Case # 27323
Site . PLYMOUTH/ HAGGERTY
Lab SWOK
Reviewer · S Tobin
Date . 10/18/99

SDG EBYJ9

Number of Soil Samples 14
Number of Water Samples 6

Sample Number ·	ECTK2MSD		ECTK3		ECTK4		SBLK1			
Sampling Location ·	SW3		SW4		FB1					
Matrix ·	Water		Water		Water		Water			
Units .	ug/L		ug/L		ug/L		ug/L			
Date Sampled	08/24/1999		08/24/1999		08/24/1999					
Time Sampled	13 30		15 05		14 15					
%Moisture	N/A		N/A		N/A		N/A			
pH	7 6		7 7		8 8		7 0			
Dilution Factor	1 0		1 0		1 0		1 0			
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
PHENOL	59		10	U	10	U	1	J		
BIS(2-CHLOROETHYL)ETHER	10	U	10	U	10	U	10	U		
2-CHLOROPHENOL	62		10	U	10	U	10	U		
1,3-DICHLOROBENZENE	10	U	10	U	10	U	10	U		
1,4-DICHLOROBENZENE	29		10	U	10	U	10	U		
1,2-DICHLOROBENZENE	10	U	10	U	10	U	10	U		
2-METHYLPHENOL	10	U	10	U	10	U	10	U		
2,2'-OXYBIS(1-CHLOROPROPANE)	10	U	10	U	10	U	10	U		
4-METHYLPHENOL	10	U	10	U	10	U	10	U		
N-NITROSO-DI-N-PROPYLAMINE	42		10	U	10	U	10	U		
HEXACHLOROETHANE	10	U	10	U	10	U	10	U		
NITROBENZENE	10	U	10	U	10	U	10	U		
ISOPHORONE	10	U	10	U	10	U	10	U		
2-NITROPHENOL	10	U	10	U	10	U	10	U		
2,4-DIMETHYLPHENOL	10	U	10	U	10	U	10	U		
BIS(2-CHLOROETHOXY)METHANE	10	U	10	U	10	U	10	U		
2,4-DICHLOROPHENOL	10	U	10	U	10	U	10	U		
1,2,4-TRICHLOROBENZENE	36		10	U	10	U	10	U		
NAPHTHALENE	10	U	10	U	10	U	10	U		
4-CHLOROANILINE	10	U	10	U	10	U	10	U		
HEXACHLOROBUTADIENE	10	U	10	U	10	U	10	U		
4-CHLORO-3-METHYLPHENOL	72		10	U	10	U	10	U		
2-METHYLNAPHTHALENE	10	U	10	U	10	U	10	U		
HEXACHLOROCYCLOPENTADIENE	10	UJ	10	UJ	10	UJ	10	U		
2,4,6-TRICHLOROPHENOL	10	U	10	U	10	U	10	U		
2,4,5-TRICHLOROPHENOL	25	U	25	U	25	U	25	U		
2-CHLORONAPHTHALENE	10	U	10	U	10	U	10	U		
2-NITROANILINE	25	U	25	U	25	U	25	U		
DIMETHYLPHTHALATE	10	U	10	U	10	U	10	U		
ACENAPHTHYLENE	10	U	10	U	10	U	10	U		
2,6-DINITROTOLUENE	10	UJ	10	UJ	10	UJ	10	UJ		
3-NITROANILINE	25	U	25	U	25	U	25	U		
ACENAPHTHENE	40		10	U	10	U	10	U		

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer	S Tobin		
Date	10/18/99		

Sample Number	ECTK2MSD		ECTK3		ECTK4		SBLK1			
Sampling Location	SW3		SW4		FB1					
Matrix	Water		Water		Water		Water			
Units	ug/L		ug/L		ug/L		ug/L			
Date Sampled	08/24/1999		08/24/1999		08/24/1999					
Time Sampled	13.30		15 05		14 15					
%Moisture	N/A		N/A		N/A		N/A			
pH	7 6		7 7		8 8		7 0			
Dilution Factor	1 0		1 0		1 0		1 0			
Semivolatile Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-DINITROPHENOL	25	UJ	25	UJ	25	UJ	25	UJ		
4-NITROPHENOL	82		25	U	25	U	25	U		
DIBENZOFURAN	10	U	10	U	10	U	10	U		
2,4-DINITROTOLUENE	50		10	U	10	U	10	U		
DIETHYLPHTHALATE	10	U	10	U	10	U	10	U		
4-CHLOROPHENYL-PHENYLETHER	10	U	10	U	10	U	10	U		
FLUORENE	10	U	10	U	10	U	10	U		
4-NITROANILINE	25	U	25	U	25	U	25	U		
4,6-DINITRO-2-METHYLPHENOL	25	UJ	25	UJ	25	UJ	25	UJ		
N-NITROSODIPHENYLAMINE	10	U	10	U	10	U	10	U		
4-BROMOPHENYL-PHENYLETHER	10	U	10	U	10	U	10	U		
HEXACHLOROBENZENE	10	U	10	U	10	U	10	U		
PENTACHLOROPHENOL	100		25	U	25	U	25	U		
PHENANTHRENE	10	U	10	U	10	U	10	U		
ANTHRACENE	10	U	10	U	10	U	10	U		
CARBAZOLE	10	U	10	U	10	U	10	U		
DI-N-BUTYLPHTHALATE	10	U	10	U	10	U	10	U		
FLUORANTHENE	10	U	10	U	10	U	10	U		
PYRENE	63		10	U	10	U	10	U		
BUTYLBENZYLPHTHALATE	10	UJ	10	UJ	10	UJ	10	U		
3,3'-DICHLOROBENZIDINE	10	UJ	10	UJ	10	UJ	10	UJ		
BENZO(A)ANTHRACENE	10	U	10	U	10	U	10	U		
CHRYSENE	10	U	10	U	10	U	10	U		
BIS(2-ETHYLHEXYL)PHTHALATE	10	UJ	10	UJ	10	UJ	2	J		
DI-N-OCTYLPHTHALATE	10	UJ	10	UJ	10	UJ	10	U		
BENZO(B)FLUORANTHENE	10	U	10	U	10	U	10	U		
BENZO(K)FLUORANTHENE	10	U	10	U	10	U	10	U		
BENZO(A)PYRENE	10	U	10	U	10	U	10	U		
INDENO(1,2,3-CD)PYRENE	10	U	10	U	10	U	10	U		
DIBENZ(A,H)ANTHRACENE	10	U	10	U	10	U	10	U		
BENZO(G,H,I)PERYLENE	10	U	10	U	10	U	10	U		

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer	S Tobin		
Date	10/18/99		

Sample Number	EBYJ9		EBYJ9DL		EBYK0		EBYK0DL		ECND7	
Sampling Location	SS4		SS4		SS5		SS5		SB1	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	11 15		11 15		12 10		12 10		15 55	
%Moisture	18		18		14		14		19	
pH	7 1		7 1		7 0		7 0		7 1	
Dilution Factor	1 0		10 0		1 0		10 0		1 0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	2 0	UJ	20	UJ	1.9	UJ	19	UJ	2 1	UJ
BETA-BHC	2 0	UJ	20	UJ	1 9	UJ	19	UJ	2 1	UJ
DELTA-BHC	2 0	UJ	20	UJ	1 9	UJ	19	UJ	2 1	UJ
GAMMA-BHC (LINDANE)	2 0	UJ	20	UJ	1 9	UJ	19	UJ	2 1	UJ
HEPTACHLOR	2 0	UJ	20	UJ	1 9	UJ	19	UJ	2 1	UJ
ALDRIN	2 0	UJ	20	UJ	1 9	UJ	19	UJ	2 1	UJ
HEPTACHLOR EPOXIDE	2 0	UJ	20	UJ	1 9	UJ	19	UJ	2 1	UJ
ENDOSULFAN I	2 0	UJ	20	UJ	1 9	UJ	19	UJ	2 1	UJ
DIELDRIN	3 9	UJ	39	UJ	3 7	UJ	37	UJ	4 0	UJ
4,4'-DDE	310	J	260	J	310	J	380	J	100	J
ENDRIN	3.9	UJ	39	UJ	3.7	UJ	37	UJ	4.0	UJ
ENDOSULFAN II	3 9	UJ	39	UJ	3 7	UJ	37	UJ	4 0	UJ
4,4'-DDD	3.9	UJ	39	UJ	9.3	J	4 5	J	12	J
ENDOSULFAN SULFATE	3 9	UJ	39	UJ	3 7	UJ	37	UJ	4 0	UJ
4,4'-DDT	120	J	120	J	180	J	190	J	26	J
METHOXYCHLOR	20	UJ	200	UJ	19	UJ	190	UJ	21	UJ
ENDRIN KETONE	3 9	UJ	39	UJ	3 7	UJ	37	UJ	4 0	UJ
ENDRIN ALDEHYDE	3 9	UJ	39	UJ	3 7	UJ	37	UJ	4 0	UJ
ALPHA-CHLORDANE	2 0	UJ	20	UJ	1 9	UJ	19	UJ	2 1	UJ
GAMMA-CHLORDANE	2 0	UJ	20	UJ	1 9	UJ	19	UJ	2 1	UJ
TOXAPHENE	200	UJ	2000	UJ	190	UJ	1900	UJ	210	UJ
AROCLOR-1016	39	UJ	390	UJ	37	UJ	370	UJ	40	UJ
AROCLOR-1221	79	UJ	790	UJ	75	UJ	750	UJ	82	UJ
AROCLOR-1232	39	UJ	390	UJ	37	UJ	370	UJ	40	UJ
AROCLOR-1242	39	UJ	390	UJ	37	UJ	370	UJ	40	UJ
AROCLOR-1248	39	UJ	390	UJ	37	UJ	370	UJ	40	UJ
AROCLOR-1254	39	UJ	390	UJ	37	UJ	370	UJ	40	UJ
AROCLOR-1260	39	UJ	390	UJ	37	UJ	370	UJ	40	UJ

Analytical Results (Qualified Data)

Case # 27323
Site PLYMOUTH/ HAGGERTY
Lab SWOK
Reviewer S Tobin
Date 10/18/99
SDG . EBYJ9

Number of Soil Samples 14
Number of Water Samples 6

Sample Number	ECND7DL		ECND8		ECND8DL		ECND9		ECND9DL	
Sampling Location	SB1		SB2		SB2		SB3		SB3	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	15 55		15 35		15 35		15 20		15 20	
%Moisture	19		12		12		11		11	
pH	7 1		7 4		7 4		7 6		7 6	
Dilution Factor	10 0		1 0		10 0		1 0		10 0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	21	UJ	1 8	UJ	18	UJ	1 8	UJ	18	UJ
BETA-BHC	21	UJ	1 8	UJ	18	UJ	1 8	UJ	18	UJ
DELTA-BHC	21	UJ	1 8	UJ	18	UJ	1 8	UJ	18	UJ
GAMMA-BHC (LINDANE)	21	UJ	1 8	UJ	18	UJ	1 8	UJ	18	UJ
HEPTACHLOR	21	UJ	1 8	UJ	18	UJ	1 8	UJ	18	UJ
ALDRIN	21	UJ	1 8	UJ	18	UJ	1 8	UJ	18	UJ
HEPTACHLOR EPOXIDE	21	UJ	1 8	UJ	18	UJ	1 8	UJ	18	UJ
ENDOSULFAN I	21	UJ	1 8	UJ	18	UJ	1 8	UJ	18	UJ
DIELDRIN	40	UJ	3 6	UJ	36	UJ	3 6	UJ	36	UJ
4,4'-DDE	110	J	64	J	83	J	62	J	74	J
ENDRIN	40	UJ	3 6	UJ	36	UJ	3 6	UJ	36	UJ
ENDOSULFAN II	40	UJ	3 6	UJ	36	UJ	3 6	UJ	36	UJ
4,4'-DDD	8 3	J	8 1	J	36	UJ	3 6	UJ	36	UJ
ENDOSULFAN SULFATE	40	UJ	3 6	UJ	36	UJ	3 6	UJ	36	UJ
4,4'-DDT	33	J	39	J	61	J	10	J	15	J
METHOXYCHLOR	0 28	J	18	UJ	180	UJ	18	UJ	180	UJ
ENDRIN KETONE	40	UJ	3 6	UJ	36	UJ	3 6	UJ	36	UJ
ENDRIN ALDEHYDE	40	UJ	3 6	UJ	36	UJ	3 6	UJ	36	UJ
ALPHA-CHLORDANE	21	UJ	1 8	UJ	18	UJ	1 8	UJ	18	UJ
GAMMA-CHLORDANE	21	UJ	1 8	UJ	18	UJ	1 8	UJ	18	UJ
TOXAPHENE	2100	UJ	180	UJ	1800	UJ	180	UJ	1800	UJ
AROCLOR-1016	400	UJ	36	UJ	360	UJ	36	UJ	360	UJ
AROCLOR-1221	820	UJ	73	UJ	730	UJ	73	UJ	730	UJ
AROCLOR-1232	400	UJ	36	UJ	360	UJ	36	UJ	360	UJ
AROCLOR-1242	400	UJ	36	UJ	360	UJ	36	UJ	360	UJ
AROCLOR-1248	400	UJ	36	UJ	360	UJ	36	UJ	360	UJ
AROCLOR-1254	400	UJ	36	UJ	360	UJ	36	UJ	360	UJ
AROCLOR-1260	400	UJ	36	UJ	360	UJ	36	UJ	360	UJ

Analytical Results (Qualified Data)

Case # 27323 SDG EBYJ9
Site PLYMOUTH/ HAGGERTY Number of Soil Samples 14
Lab SWOK Number of Water Samples 6
Reviewer S Tobin
Date 10/18/99

Sample Number	ECTJ3		ECTJ3DL		ECTJ4		ECTJ4DL		ECTJ4MS	
Sampling Location	SB5		SB5		SB6		SB6		SB6	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	10 45		10 45		11 40		11 40		11 40	
%Moisture	13		13		13		13		13	
pH	7 7		7 7		7 7		7 7		7 7	
Dilution Factor	1 0		10 0		1 0		10 0		1 0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	2.0	UJ	20	UJ	1 8	U	18	U	1 8	U
BETA-BHC	2 0	UJ	20	UJ	1 8	U	18	U	1 8	U
DELTA-BHC	2 0	UJ	20	UJ	1 8	U	18	U	1 8	U
GAMMA-BHC (LINDANE)	2 0	UJ	20	UJ	1 8	U	18	U	10	J
HEPTACHLOR	2 0	UJ	20	UJ	10	U	18	U	23	U
ALDRIN	2 0	UJ	20	UJ	1 8	U	18	U	11	J
HEPTACHLOR EPOXIDE	2 0	UJ	20	UJ	1 8	U	18	U	1 8	U
ENDOSULFAN I	2 0	UJ	20	UJ	1 8	U	18	U	1 8	U
DIELDRIN	3 8	UJ	38	UJ	3 4	U	34	U	22	J
4,4'-DDE	16	J	25	J	3 4	U	34	U	3 5	U
ENDRIN	3.8	UJ	38	UJ	3 4	U	34	U	23	J
ENDOSULFAN II	3.8	UJ	38	UJ	3 4	U	34	U	3 5	U
4,4'-DDD	14	J	16	J	3 4	U	34	U	3 5	U
ENDOSULFAN SULFATE	3 8	UJ	38	UJ	3 4	U	34	U	3 5	U
4,4'-DDT	13	J	24	J	3 4	U	34	U	18	J
METHOXYCHLOR	20	UJ	200	UJ	18	U	180	U	6 0	J
ENDRIN KETONE	3 8	UJ	38	UJ	3 4	U	34	U	3 5	U
ENDRIN ALDEHYDE	3 8	UJ	38	UJ	3 4	U	34	U	3 5	U
ALPHA-CHLORDANE	2 0	UJ	20	UJ	1 8	U	18	U	1 8	U
GAMMA-CHLORDANE	2 0	UJ	20	UJ	2 4		18	U	2 6	
TOXAPHENE	200	UJ	2000	UJ	180	U	1800	U	180	U
AROCLOR-1016	38	UJ	380	UJ	34	U	340	U	35	U
AROCLOR-1221	77	UJ	770	UJ	70	U	700	U	72	U
AROCLOR-1232	38	UJ	380	UJ	34	U	340	U	35	U
AROCLOR-1242	38	UJ	380	UJ	34	U	340	U	35	U
AROCLOR-1248	38	UJ	380	UJ	34	U	340	U	35	U
AROCLOR-1254	38	UJ	380	UJ	34	U	340	U	35	U
AROCLOR-1260	38	UJ	380	UJ	34	U	340	U	35	U

Analytical Results (Qualified Data)

Case # 27323 SDG EBYJ9
Site PLYMOUTH/ HAGGERTY Number of Soil Samples . 14
Lab SWOK Number of Water Samples 6
Reviewer S Tobin
Date 10/18/99

Sample Number	ECTJ4MSD		ECTJ5		ECTJ5DL		ECTJ6		ECTJ6DL	
Sampling Location	SB6		SB7		SB7		SB8		SB8	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	11 40		10 15		10 15		14 30		14 30	
%Moisture	13		12		12		10		10	
pH	7 7		7 9		7 9		7 9		7 9	
Dilution Factor	1 0		1 0		10 0		1 0		10 0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	1 9	U	1 9	UJ	19	UJ	1 9	UJ	19	UJ
BETA-BHC	1 9	U	1 9	UJ	19	UJ	1 9	UJ	19	UJ
DELTA-BHC	1 9	U	1 9	UJ	19	UJ	1 9	UJ	19	UJ
GAMMA-BHC (LINDANE)	10	J	1 9	UJ	19	UJ	1.9	UJ	19	UJ
HEPTACHLOR	21	U	1 9	UJ	19	UJ	1 9	UJ	19	UJ
ALDRIN	11	J	1 9	UJ	19	UJ	1 9	UJ	19	UJ
HEPTACHLOR EPOXIDE	1 9	U	1 9	UJ	19	UJ	1 9	UJ	19	UJ
ENDOSULFAN I	1 9	U	1 9	UJ	19	UJ	1 9	UJ	19	UJ
DIELDRIN	21		3 6	UJ	36	UJ	3 6	UJ	36	UJ
4,4'-DDE	3 7	U	3 6	UJ	36	UJ	2 9	J	36	UJ
ENDRIN	24		3 6	UJ	36	UJ	3 6	UJ	36	UJ
ENDOSULFAN II	3 7	U	3 6	UJ	36	UJ	3 6	UJ	36	UJ
4,4'-DDD	3 7	U	3 6	UJ	36	UJ	3 6	UJ	36	UJ
ENDOSULFAN SULFATE	3 7	U	3 6	UJ	36	UJ	3 6	UJ	36	UJ
4,4'-DDT	17	J	3.6	UJ	36	UJ	3 6	UJ	36	UJ
METHOXYCHLOR	19	U	19	UJ	190	UJ	19	UJ	190	UJ
ENDRIN KETONE	3 7	U	3 6	UJ	36	UJ	3 6	UJ	36	UJ
ENDRIN ALDEHYDE	3 7	U	3 6	UJ	36	UJ	3 6	UJ	36	UJ
ALPHA-CHLORDANE	1 9	U	1 9	UJ	19	UJ	1 9	UJ	19	UJ
GAMMA-CHLORDANE	2 7		1 9	UJ	19	UJ	1 9	UJ	19	UJ
TOXAPHENE	190	U	190	UJ	1900	UJ	190	UJ	1900	UJ
AROCLOR-1016	37	U	36	UJ	360	UJ	36	UJ	360	UJ
AROCLOR-1221	75	U	74	UJ	740	UJ	74	UJ	740	UJ
AROCLOR-1232	37	U	36	UJ	360	UJ	36	UJ	360	UJ
AROCLOR-1242	37	U	36	UJ	360	UJ	36	UJ	360	UJ
AROCLOR-1248	37	U	36	UJ	360	UJ	36	UJ	360	UJ
AROCLOR-1254	37	U	36	UJ	360	UJ	36	UJ	360	UJ
AROCLOR-1260	37	U	36	UJ	360	UJ	36	UJ	360	UJ

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer.	S Tobin		
Date	10/18/99		

Sample Number	ECTJ7		ECTJ7DL		ECTJ8		ECTJ8DL		EZB39	
Sampling Location	SB9		SB9		SB10		SB10		SS1	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	14 15		14 15		14 35		14 35		11 00	
%Moisture	11		11		6		6		11	
pH	7 8		7 8		7 6		7 6		7 6	
Dilution Factor	1 0		10 0		1 0		10 0		10 0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	1 8	UJ	18	UJ	1 8	UJ	18	UJ	18	UJ
BETA-BHC	1 8	UJ	18	UJ	1 8	UJ	18	UJ	18	UJ
DELTA-BHC	1.8	UJ	18	UJ	1 8	UJ	18	UJ	18	UJ
GAMMA-BHC (LINDANE)	1.8	UJ	18	UJ	1 8	UJ	18	UJ	18	UJ
HEPTACHLOR	1 8	UJ	18	UJ	1 8	UJ	18	UJ	18	UJ
ALDRIN	1 8	UJ	18	UJ	1 8	UJ	18	UJ	18	UJ
HEPTACHLOR EPOXIDE	1.8	UJ	18	UJ	1 8	UJ	18	UJ	18	UJ
ENDOSULFAN I	1 8	UJ	18	UJ	1 8	UJ	18	UJ	18	UJ
DIELDRIN	3 4	UJ	34	UJ	3.4	UJ	34	UJ	35	UJ
4,4'-DDE	15	J	16	J	13	J	16	J	620	J
ENDRIN	3 4	UJ	34	UJ	2 6	J	34	UJ	35	UJ
ENDOSULFAN II	3 4	UJ	34	UJ	3 4	UJ	34	UJ	21	J
4,4'-DDD	3 4	UJ	34	UJ	3 4	UJ	34	UJ	28	J
ENDOSULFAN SULFATE	3 4	UJ	34	UJ	2 5	J	34	UJ	35	UJ
4,4'-DDT	8 0	J	34	UJ	78	J	95	J	520	J
METHOXYCHLOR	18	UJ	180	UJ	18	UJ	180	UJ	180	UJ
ENDRIN KETONE	3 4	UJ	34	UJ	3 4	UJ	34	UJ	35	UJ
ENDRIN ALDEHYDE	3 4	UJ	34	UJ	3 4	UJ	34	UJ	35	UJ
ALPHA-CHLORDANE	1 8	UJ	18	UJ	8 8	J	11	J	18	UJ
GAMMA-CHLORDANE	1 8	UJ	18	UJ	10	J	10	J	18	UJ
TOXAPHENE	180	UJ	1800	UJ	180	UJ	1800	UJ	1800	UJ
AROCLOR-1016	34	UJ	340	UJ	34	UJ	340	UJ	350	UJ
AROCLOR-1221	70	UJ	700	UJ	69	UJ	690	UJ	710	UJ
AROCLOR-1232	34	UJ	340	UJ	34	UJ	340	UJ	350	UJ
AROCLOR-1242	34	UJ	340	UJ	34	UJ	340	UJ	350	UJ
AROCLOR-1248	34	UJ	340	UJ	34	UJ	340	UJ	350	UJ
AROCLOR-1254	34	UJ	340	UJ	34	UJ	340	UJ	350	UJ
AROCLOR-1260	34	UJ	340	UJ	34	UJ	340	UJ	350	UJ

Analytical Results (Qualified Data)

Case # 27323
Site PLYMOUTH/ HAGGERTY
Lab SWOK
Reviewer S Tobin
Date 10/18/99

SDG EBYJ9

Number of Soil Samples 14
Number of Water Samples 6

Sample Number	EZB39DL		EZB41		EZB41DL		EZB42		EZB42DL	
Sampling Location	SS1		SS2		SS2		SS3		SS3	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	11 00		11 05		11 05		11 10		11 10	
%Moisture	11		27		27		29		29	
pH	7 6		7 4		7 4		7 5		7 5	
Dilution Factor	50 0		1 0		10 0		1 0		10 0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	91	UJ	2 2	UJ	22	UJ	2 2	UJ	22	UJ
BETA-BHC	91	UJ	2 2	UJ	22	UJ	2 2	UJ	22	UJ
DELTA-BHC	91	UJ	2.2	UJ	22	UJ	2 2	UJ	22	UJ
GAMMA-BHC (LINDANE)	91	UJ	2 2	UJ	22	UJ	2 2	UJ	22	UJ
HEPTACHLOR	91	UJ	2 2	UJ	22	UJ	2 2	UJ	22	UJ
ALDRIN	91	UJ	2 2	UJ	22	UJ	2 2	UJ	22	UJ
HEPTACHLOR EPOXIDE	91	UJ	2 2	UJ	22	UJ	2 2	UJ	22	UJ
ENDOSULFAN I	91	UJ	2 2	UJ	22	UJ	2 2	UJ	22	UJ
DIELDRIN	180	UJ	4 3	UJ	43	UJ	4 3	UJ	43	UJ
4,4'-DDE	750	J	240	J	320	J	180	J	210	J
ENDRIN	180	UJ	4 3	UJ	43	UJ	4 3	UJ	43	UJ
ENDOSULFAN II	180	UJ	11	J	9 4	J	72	J	65	J
4,4'-DDD	180	UJ	13	J	12	J	84	J	84	J
ENDOSULFAN SULFATE	180	UJ	4 3	UJ	43	UJ	4 3	UJ	43	UJ
4,4'-DDT	660	J	110	J	150	J	55	J	53	J
METHOXYCHLOR	910	UJ	22	UJ	220	UJ	22	UJ	220	UJ
ENDRIN KETONE	180	UJ	4 3	UJ	43	UJ	4 3	UJ	43	UJ
ENDRIN ALDEHYDE	180	UJ	4 3	UJ	43	UJ	4 3	UJ	43	UJ
ALPHA-CHLORDANE	91	UJ	2 2	UJ	22	UJ	2 2	UJ	22	UJ
GAMMA-CHLORDANE	91	UJ	2 2	UJ	22	UJ	2 2	UJ	22	UJ
TOXAPHENE	9100	UJ	220	UJ	2200	UJ	220	UJ	2200	UJ
AROCLOR-1016	1800	UJ	43	UJ	430	UJ	43	UJ	430	UJ
AROCLOR-1221	3600	UJ	88	UJ	880	UJ	86	UJ	860	UJ
AROCLOR-1232	1800	UJ	43	UJ	430	UJ	43	UJ	430	UJ
AROCLOR-1242	1800	UJ	43	UJ	430	UJ	43	UJ	430	UJ
AROCLOR-1248	1800	UJ	43	UJ	430	UJ	43	UJ	430	UJ
AROCLOR-1254	1800	UJ	43	UJ	430	UJ	43	UJ	430	UJ
AROCLOR-1260	1800	UJ	43	UJ	430	UJ	43	UJ	430	UJ

Analytical Results (Qualified Data)

Case # 27323 SDG EBYJ9
Site PLYMOUTH/ HAGGERTY Number of Soil Samples 14
Lab SWOK Number of Water Samples 6
Reviewer S Tobin
Date 10/18/99

Sample Number	PBLKSA		PBLKSB		PBLKSI					
Sampling Location										
Matrix	Soil		Soil		Soil					
Units	ug/Kg		ug/Kg		ug/Kg					
Date Sampled										
Time Sampled										
%Moisture	N/A		N/A		N/A					
pH	7 0		7 0		7 0					
Dilution Factor	1 0		1 0		1 0					
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	1 7	U	1 7	U	1 7	U				
BETA-BHC	1 7	U	1 7	U	1 7	U				
DELTA-BHC	1 7	U	1.7	U	1 7	U				
GAMMA-BHC (LINDANE)	1 7	U	1 7	U	1 7	U				
HEPTACHLOR	1.7	U	1 7	U	13	J				
ALDRIN	1 7	U	1 7	U	1 7	U				
HEPTACHLOR EPOXIDE	1 7	U	1 7	U	1 7	U				
ENDOSULFAN I	1 7	U	1 7	U	1 7	U				
DIELDRIN	3 3	U	3 3	U	3 3	U				
4,4'-DDE	3 3	U	3 3	U	3 3	U				
ENDRIN	3 3	U	3 3	U	3 3	U				
ENDOSULFAN II	3 3	U	3 3	U	3 3	U				
4,4'-DDD	3 3	U	3 3	U	3 3	U				
ENDOSULFAN SULFATE	3 3	U	3 3	U	3 3	U				
4,4'-DDT	3 3	U	3 3	U	3 3	U				
METHOXYCHLOR	17	U	17	U	17	U				
ENDRIN KETONE	3 3	U	3 3	U	3 3	U				
ENDRIN ALDEHYDE	3 3	U	3 3	U	3 3	U				
ALPHA-CHLORDANE	1 7	U	1.7	U	1 7	U				
GAMMA-CHLORDANE	1 7	U	1 7	U	1 7	U				
TOXAPHENE	170	U	170	U	170	U				
AROCLOR-1016	33	U	33	U	33	U				
AROCLOR-1221	67	U	67	U	67	U				
AROCLOR-1232	33	U	33	U	33	U				
AROCLOR-1242	33	U	33	U	33	U				
AROCLOR-1248	33	U	33	U	33	U				
AROCLOR-1254	33	U	33	U	33	U				
AROCLOR-1260	33	U	33	U	33	U				

Analytical Results (Qualified Data)

Case # 27323 SDG EBYJ9
Site PLYMOUTH/ HAGGERTY
Lab SWOK
Reviewer S Tobin
Date 10/18/99

Number of Soil Samples 14
Number of Water Samples 6

Sample Number	ECTJ9		ECTK0		ECTK1		ECTK2		ECTK2MS	
Sampling Location	SW1		SW2		SW2D		SW3		SW3	
Matrix	Water		Water		Water		Water		Water	
Units	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled	08/24/1999		08/24/1999		08/24/1999		08/24/1999		08/24/1999	
Time Sampled	11 40		10 35		10 35		13 30		13 30	
%Moisture	N/A		N/A		N/A		N/A		N/A	
pH	7 6		7 2		7 2		7 6		7.6	
Dilution Factor	1 0		1 0		1 0		1 0		1 0	
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	0 050	U	0 050	U	0 050	U	0 050	U	0 050	U
BETA-BHC	0 050	U	0 050	U	0 050	U	0 050	U	0 050	U
DELTA-BHC	0 050	U	0 050	U	0 050	U	0 050	U	0 050	U
GAMMA-BHC (LINDANE)	0.050	U	0 050	U	0 050	U	0 050	UJ	0 34	
HEPTACHLOR	0 050	U	0 050	U	0 050	U	0 050	U	0 36	
ALDRIN	0 050	U	0 050	U	0 050	U	0 050	U	0 31	
HEPTACHLOR EPOXIDE	0 050	U	0 050	U	0 050	U	0 050	U	0 050	U
ENDOSULFAN I	0 050	U	0 050	U	0 050	U	0 050	U	0 050	U
DIELDRIN	0 10	U	0 10	U	0 10	U	0 10	U	0 67	
4,4'-DDE	0 10	U	0 10	U	0 10	U	0 10	U	0 10	U
ENDRIN	0 10	U	0 10	U	0 10	U	0 10	U	0 72	
ENDOSULFAN II	0 10	U	0 10	U	0 10	U	0 10	U	0 10	U
4,4'-DDD	0 10	U	0 10	U	0 10	U	0 10	U	0 10	U
ENDOSULFAN SULFATE	0 10	U	0 10	U	0 10	U	0 10	U	0 10	U
4,4'-DDT	0 10	U	0 10	U	0 10	U	0 10	U	0 73	
METHOXYCHLOR	0 50	U	0 50	U	0 50	U	0 50	U	0 50	U
ENDRIN KETONE	0 10	U	0 10	U	0 10	U	0 10	U	0 10	U
ENDRIN ALDEHYDE	0.10	U	0 10	U	0 10	U	0 10	U	0 10	U
ALPHA-CHLORDANE	0.050	U	0 050	U	0.050	U	0 050	U	0 050	U
GAMMA-CHLORDANE	0 050	U	0 050	U	0 050	U	0 050	U	0 050	U
TOXAPHENE	5 0	U	5 0	U	5 0	U	5 0	U	5 0	U
AROCLOR-1016	1 0	U	1 0	U	1 0	U	1 0	U	1 0	U
AROCLOR-1221	2 0	U	2 0	U	2 0	U	2 0	U	2.0	U
AROCLOR-1232	1 0	U	1 0	U	1 0	U	1 0	U	1 0	U
AROCLOR-1242	1 0	U	1 0	U	1 0	U	1.0	U	1 0	U
AROCLOR-1248	1 0	U	1 0	U	1 0	U	1 0	U	1 0	U
AROCLOR-1254	1 0	U	1 0	U	1 0	U	1 0	U	1 0	U
AROCLOR-1260	1 0	U	1 0	U	1 0	U	1 0	U	1 0	U

Analytical Results (Qualified Data)

Case # 27323	SDG EBYJ9		
Site	PLYMOUTH/ HAGGERTY	Number of Soil Samples	14
Lab	SWOK	Number of Water Samples	6
Reviewer	S Tobin		
Date	10/18/99		

Sample Number :	ECTK2MSD		ECTK3		ECTK4		PBLKWA			
Sampling Location	SW3		SW4		FB1					
Matrix	Water		Water		Water		Water			
Units	ug/L		ug/L		ug/L		ug/L			
Date Sampled	08/24/1999		08/24/1999		08/24/1999					
Time Sampled	13 30		15 05		14 15					
%Moisture	N/A		N/A		N/A		N/A			
pH	7 6		7 7		8 8		7 0			
Dilution Factor	1 0		1 0		1 0		1 0			
Pesticide/PCB Compound	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALPHA-BHC	0 050	U	0 050	U	0 050	U	0 050	U		
BETA-BHC	0 050	U	0 050	U	0 050	U	0 050	U		
DELTA-BHC	0 050	U	0 050	U	0 050	U	0 050	U		
GAMMA-BHC (LINDANE)	0 28		0 050	U	0 050	U	0 050	U		
HEPTACHLOR	0 31		0 050	U	0 050	U	0 050	U		
ALDRIN	0 26		0 050	U	0 050	U	0 050	U		
HEPTACHLOR EPOXIDE	0 050	U	0 050	U	0.050	U	0 050	U		
ENDOSULFAN I	0 050	U	0 050	U	0 050	U	0 050	U		
DIELDRIN	0 58		0 10	U	0 10	U	0 10	U		
4,4'-DDE	0 10	U	0 10	U	0 10	U	0 10	U		
ENDRIN	0 62		0.10	U	0 10	U	0 10	U		
ENDOSULFAN II	0 10	U	0 10	U	0 10	U	0 10	U		
4,4'-DDD	0.10	U	0 10	U	0 10	U	0 10	U		
ENDOSULFAN SULFATE	0 10	U	0 10	U	0 10	U	0 10	U		
4,4'-DDT	0 63		0.10	U	0 10	U	0 10	U		
METHOXYCHLOR	0 50	U	0 50	U	0 50	U	0 50	U		
ENDRIN KETONE	0 10	U	0.10	U	0 10	U	0 10	U		
ENDRIN ALDEHYDE	0 10	U	0 10	U	0 10	U	0 10	U		
ALPHA-CHLORDANE	0 050	U	0 050	U	0 050	U	0 050	U		
GAMMA-CHLORDANE	0 050	U	0 050	U	0 050	U	0 050	U		
TOXAPHENE	5 0	U	5 0	U	5 0	U	5 0	U		
AROCLOR-1016	1 0	U	1 0	U	1.0	U	1 0	U		
AROCLOR-1221	2.0	U	2.0	U	2 0	U	2 0	U		
AROCLOR-1232	1 0	U	1 0	U	1 0	U	1 0	U		
AROCLOR-1242	1 0	U	1.0	U	1 0	U	1 0	U		
AROCLOR-1248	1 0	U	1 0	U	1 0	U	1 0	U		
AROCLOR-1254	1 0	U	1 0	U	1 0	U	1 0	U		
AROCLOR-1260	1 0	U	1 0	U	1 0	U	1 0	U		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Data Set No: EBYJ9 CERCLIS No: ZZ

Case No: 27323 Site Name Location: Plymouth/ Haggerty

Contractor or EPA Lab: SWOL Data User: MDEQ

No. of Samples: 20 Date Sampled or Data Received: 10-4-99

Have Chain-of-Custody records been received? Yes ✓ No ____
Have traffic reports or packing lists been received? Yes ✓ No ____
If no, are traffic report or packing list numbers written on the chain-of-custody record? Yes ____ No ____
If no, which traffic report or packing list numbers are missing?

____ ____ ____ ____

____ ____ ____ ____

Are basic data forms in? Yes ✓ No ____
No of samples claimed: 20 No. of samples received: 20

Received by: Stephanie Tobin Date: 10-4-99

Received by LSSS: Stephanie Tobin Date: 10-4-99

Review started: 10-18-99 Reviewer Signature: Stephanie Tobin

Total time spent on review: 19hrs Date review completed: 10-19-99

Copied by: Lynette Burnett Date: 10-28-99

Mailed to user by: Lynette Burnett Date: 10-28-99

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffen, Data mgmt. Coordinator, Region V, 5SCRL

Data received by: ____ Date: ____

Data review received by: ____ Date: ____

Inorganic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete [ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

____

____

Received by Data Mgmt. Coordinator for Files. Data: ____

APPENDIX D

PART 201 CRITERIA

GROUNDWATER: RESIDENTIAL AND INDUSTRIAL-COMMERCIAL

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

Developed under the authority of the

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451, AS AMENDED

Groundwater criteria were calculated using currently available toxicological and chemical-specific data These criteria may change as new data become available They are not necessarily final cleanup standards Current criteria are available on the ERD Homepage at www deq state mi us/erd Scientific notation is represented by E+ or E- a value, for example 2 x 10^6 is reported as 2 0E+6 Please refer to Operational Memorandum #6 for analytical methods and method detection limits All values are expressed in units of parts per billion (ug/L) Changes made since the last revision of the tables (January 1999) are shaded

		#1	#2	#3	#4	#5	#6	#7	#8	#9
Chemical	Chemical Abstract Service Number	Residential & Commercial I Drinking Water Criteria	Industrial & Commercial II, III & IV Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria	Groundwater Contact Criteria (AA)	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level
BTEX + MTBE										
Benzene (I)	71432	5 0 (A)	5 0 (A)	200 (X)	5,600	36,000	9,400	1 75E+6	34,000	67,000
Ethylbenzene (I)	100414	74 (E)	74 (E)	18	1 7E+5 (S)	1 7E+5 (S)	1 7E+5 (S)	1 69E+5	22,000	1 7E+5 (S)
Methyl-tert-butyl ether (MTBE)	1634044	40 (E)	40 (E)	730 (X)	4 7E+7 (S)	4 7E+7 (S)	6 5E+5	4 68E+7	ID	ID
Toluene (I)	108883	790 (E)	790 (E)	140	5 3E+5 (S)	5 3E+5 (S)	5 3E+5 (S)	5 26E+5	31,000	ID
Xylenes (I)	1330207	280 (E)	280 (E)	35	1 9E+5 (S)	1 9E+5 (S)	1 9E+5 (S)	1 86E+5	35,000	1 9E+5 (S)
VOLATILES										
Acetone (I)	67641	730	2,100	1,700	1 0E+9 (D)	1 0E+9 (D)	3 1E+7	1 00E+9	7 5E+6	1 0E+9 (D)
Acrolein (I)	107028	120	330	NA	2,100	4,200	3 4E+6	2 10E+8	3 3E+6	3 4E+5
Acrylonitrile (I)	107131	1 6	6 4	4 9 (X)	34,000	1 9E+5	8,100	7 50E+7	3 2E+6	ID
Benzyl chloride	100447	5 0	20	NA	12,000	77,000	2,000	4 90E+5	ID	ID
Bromobenzene (I)	108861	18	50	NA	1 8E+5	3 9E+5	9,900	4 13E+5	ID	ID
Bromodichloromethane	75274	100 (A,W)	100 (A,W)	ID	4,800	38,000	11,000	6 74E+6	ID	ID
Bromoform	75252	100 (A,W)	100 (A,W)	ID	4 8E+5	3 1E+6 (S)	1 0E+5	3 10E+6	ID	ID
Bromomethane	74839	10	29	35	4,000	9,000	65,000	1 45E+7	ID	ID
n-Butanol (I)	71363	950	2,700	NA	NLV	NLV	8 2E+6	7 40E+7	2 4E+7	7 4E+7 (S)
2-Butanone (MEK) (I)	78933	13,000	38,000	2,200	2 4E+8 (S)	2 4E+8 (S)	2 4E+8 (S)	2 40E+8	ID	2 4E+8 (S)
n-Butyl acetate (I)	123864	550	1,600	NA	6 7E+6 (S)	6 7E+6 (S)	1 6E+6	6 70E+6	1 2E+6	6 7E+6 (S)
t-Butyl alcohol (I)	75650	3,900	11,000	NA	1 0E+9 (D)	1 0E+9 (D)	7 7E+7	1 00E+9	3 0E+7	ID
n-Butylbenzene	104518	80	230	NA	ID	ID	ID	NA	ID	ID
sec-Butylbenzene	135988	80	230	NA	ID	ID	ID	NA	ID	ID
tert-Butylbenzene (I)	98066	80	230	NA	ID	ID	ID	NA	ID	ID

GROUNDWATER: RESIDENTIAL AND INDUSTRIAL-COMMERCIAL

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

		#1	#2	#3	#4	#5	#6	#7	#8	#9
Chemical	Chemical Abstract Service Number	Residential & Commercial I Drinking Water Criteria	Industrial & Commercial II, III & IV Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria	Groundwater Contact Criteria (AA)	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level
Carbon disulfide (I,R)	75150	800	2,300	ID	2 5E+5	5 5E+5	1 1E+6	1 19E+6	6,500	ID
Carbon tetrachloride	56235	5 0 (A)	5 0 (A)	45 (X)	370	2,400	1,600	7 93E+5	ID	96,000
Chlorobenzene (I)	108907	100 (A)	100 (A)	47	2 1E+5	4 7E+5 (S)	68,000	4 72E+5	79,000	ID
Chloroethane (I)	75003	220	910	ID	5 7E+6 (S)	5 7E+6 (S)	2 0E+5	5 74E+6	56,000	ID
2-Chloroethyl vinyl ether	110758	ID	ID	NA	ID	ID	ID	1 50E+7	ID	ID
Chloroform	67663	100 (A,W)	100 (A,W)	170 (X)	28,000	1 8E+5	96,000	7 92E+6	ID	ID
Chloromethane (I)	74873	66	270	ID	8,600	52,000	1 1E+5	6 34E+6	18,000	2 1E+5
o-Chlorotoluene (I)	95498	150	420	NA	3 7E+5 (S)	3 7E+5 (S)	35,000	3 73E+5	ID	ID
Dibromochloromethane	124481	100 (A,W)	100 (A,W)	ID	15,000	1 1E+5	9,500	2 60E+6	ID	ID
Dibromochloropropane	96128	0 2 (A)	0 2 (A)	NA	1,200 (S)	1,200 (S)	300	NA	ID	ID
Dibromomethane	74953	80	230	NA	ID	ID	5 1E+5	1 10E+7	ID	ID
Dichlorodifluoromethane	75718	1,700	4,800	ID	2 2E+5	3 0E+5 (S)	3 0E+5 (S)	3 00E+5	ID	ID
1,1-Dichloroethane (I)	75343	880	2,500	ID	5 1E+6 (S)	5 1E+6 (S)	2 1E+6	5 06E+6	1 9E+5	ID
1,2-Dichloroethane (I)	107062	5 0 (A)	5 0 (A)	360 (X)	9,600	59,000	11,000	8 52E+6	1 3E+6	ID
1,1-Dichloroethylene (I)	75354	7 0 (A)	7 0 (A)	65 (X)	200	1,300	9,000	2 25E+6	48,000	1 4E+5
cis-1,2-Dichloroethylene (I)	156592	70 (A)	70 (A)	ID	3 5E+6 (S)	3 5E+6 (S)	1 7E+5	3 50E+6	2 7E+5	ID
trans-1,2-Dichloroethylene	156605	100 (A)	100 (A)	ID	6 3E+6 (S)	6 3E+6 (S)	1 9E+5	6 30E+6	1 2E+5	ID
1,2-Dichloropropane (I)	78875	5 0 (A)	5 0 (A)	290 (X)	16,000	36,000	7,500	2 80E+6	2 7E+5	2 8E+6 (S)
1,3-Dichloropropene (I,J)	542756	4 7	19	NA	300	2,000	2,600	2 80E+6	66,000	ID
Diethyl ether (I)	60297	10 (E,M)	10 (E,M)	ID	6 1E+7 (S)	6 1E+7 (S)	3 3E+7	6 10E+7	3 2E+5	6 1E+7 (S)
Dimethylformamide (I)	68122	700	2,000	NA	NLV	NLV	1 3E+8	1 00E+9	ID	ID
Dimethylsulfoxide	67685	2 2E+5	6 3E+5	1 9E+5	NLV	NLV	1 7E+8 (S)	1 66E+8	ID	ID
1,4-Dioxane (I)	123911	77	320	2 900 (X)	NLV	NLV	1 7E+6	9 00E+8	7 2E+7	ID
Epichlorohydrin (I)	106898	86	350	NA	3 2E+5	6 3E+5	6 8E+5	6 60E+7	2 3E+7	ID
Ethanol (I)	64175	1,9E+6	3 8E+6	IP	NLV	NLV	1 0E+9 (D)	1 00E+9	4 8E+7	ID
Ethyl acetate (I)	141786	6 600	19,000	NA	6 4E+7 (S)	6 4E+7 (S)	6 4E+7(S)	6 40E+7	2 1E+6	ID
Ethylene dibromide	106934	0 05 (A)	0 05 (A)	NA	2,400	15,000	16	4 20E+6	ID	ID
n-Heptane (I)	142825	32,000	92,000	NA	2,700 (S)	2,700 (S)	2,700 (S)	2,690	100	2 700 (S)
n-Hexane (I)	110543	3,000	8,600	NA	12,000 (S)	12,000 (S)	12,000 (S)	12,000	12,000 (S)	ID
2-Hexanone (I)	591786	1,000	2,900	NA	4 2E+6	8 8E+6	4 8E+6	1 60E+7	ID	ID

GROUNDWATER: RESIDENTIAL AND INDUSTRIAL-COMMERCIAL
PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

		#1	#2	#3	#4	#5	#6	#7	#8	#9
Chemical	Chemical Abstract Service Number	Residential & Commercial I Drinking Water Criteria	Industrial & Commercial II, III & IV Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria	Groundwater Contact Criteria (AA)	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level
Isobutyl alcohol (I)	78831	2,300	6,700	NA	7 6E+7 (S)	7 6E+7 (S)	2 4E+7	7 60E+7	ID	ID
Isopropyl alcohol (I)	67630	470	1,300	NA	NLV	NLV	1 3E+7	1 00E+9	3 0E+7	1 0E+9 (D)
Isopropyl benzene (I)	98828	800	2,300	ID	56,000 (S)	56,000 (S)	56,000 (S)	56,000	15,000	ID
Methane	74828	ID	ID	ID	(K)	(K)	ID	NA	(K)	ID
Methanol (I)	67561	3,700	10,000	ID	2 5E+6	6 0E+6	2 9E+7 (S)	2 90E+7	2 3E+6	2 9E+7 (S)
4-Methyl-2-pentanone (MIBK) (I)	108101	1,800	5,200	ID	2 0E+7 (S)	2 0E+7 (S)	1 2E+7	2 00E+7	ID	2 0E+7 (S)
Methylene chloride	75092	5 0 (A)	5 0 (A)	940 (X)	2 2E+5	1 4E+6	1 1E+5	1 70E+7	ID	ID
Pentane (I)	109660	ID	ID	NA	38,000 (S)	38,000 (S)	ID	38,200	170	38,000 (S)
2-Pentene (I)	109682	ID	ID	NA	ID	ID	ID	2 03E+5	ID	ID
Propyl alcohol (I)	71238	1,400	4,000	NA	NLV	NLV	2 7E+7	1 00E+9	3 6E+7	1 0E+9 (D)
n-Propylbenzene (I)	103651	80	230	ID	ID	ID	ID	NA	ID	ID
Styrene (I)	100425	100 (A)	100 (A)	80	1 6E+5	3 1E+5 (S)	3,200	3 10E+5	68,000	3 1E+5 (S)
1,1,1,2-Tetrachloroethane	630206	33	130	NA	15,000	96,000	11,000	1 10E+6	ID	ID
1,1,2,2-Tetrachloroethane	79345	4 3	17	78 (X)	12,000	77,000	2,100	2 97E+6	ID	ID
Tetrachloroethylene	127184	5 0 (A)	5 0 (A)	45 (X)	25,000	1 7E+5	5,100	2 00E+5	ID	2 0E+5 (S)
Tetrahydrofuran (I)	109999	240	690	11,000 (X)	6 9E+6	1 6E+7	3 9E+6	1 00E+9	30,000	3 6E+6
1,1,1-Trichloroethane	71556	200 (A)	200 (A)	200	6 6E+5	1 3E+6 (S)	2 2E+5	1 33E+6	ID	1 3E+6 (S)
1,1,2-Trichloroethane	79005	5 0 (A)	5 0 (A)	330 (X)	17,000	1 1E+5	9,500	4 42E+6	1 8E+6	ID
Trichloroethylene	79016	5 0 (A)	5 0 (A)	200 (X)	15,000	97,000	11,000	1 10E+6	ID	1 1E+6 (S)
Trichlorofluoromethane	75694	2,600	7,300	NA	1 1E+6 (S)	1 1E+6 (S)	1 1E+6 (S)	1 10E+6	ID	1 1E+6 (S)
1,2,3-Trichloropropane	96184	42	120	NA	ID	ID	74,000	1 90E+6	ID	ID
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	1 7E+5 (S)	1 7E+5 (S)	NA	1 7E+5 (S)	1 7E+5 (S)	1 7E+5 (S)	1 70E+5	ID	1 7E+5 (S)
Triethanolamine	102716	3,700	10,000	NA	NLV	NLV	1 0E+9 (D)	1 00E+9	ID	ID
2,2,4-Trimethyl pentane	540841	ID	ID	NA	ID	ID	ID	2,330	ID	ID
2,2,4-Trimethyl-2-pentene (I)	107404	ID	ID	NA	ID	ID	ID	11,900	ID	ID
1,2,4-Trimethylbenzene (I)	95636	63 (E)	63 (E)	ID	56,000 (S)	56,000 (S)	1 6E+5	55,800	37,000	ID
1,3,5-Trimethylbenzene (I)	108678	72 (E)	72 (E)	ID	61,000 (S)	61,000 (S)	2 1E+5	61,150	ID	ID
Vinyl acetate (I)	108054	640	1,800	NA	4 1E+6	8 9E+6	7 7E+6	2 00E+7	8 8E+5	4 8E+6
Vinyl chloride	75014	2 0 (A)	2 0 (A)	15	110	690	290	2 76E+6	17,000	ID

GROUNDWATER: RESIDENTIAL AND INDUSTRIAL-COMMERCIAL

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

		#1	#2	#3	#4	#5	#6	#7	#8	#9
Chemical	Chemical Abstract Service Number	Residential & Commercial I Drinking Water Criteria	Industrial & Commercial II, III & IV Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria	Groundwater Contact Criteria (AA)	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level
INORGANICS										
Aluminum (B)	7429905	50 (V)	50 (V)	NA	NLV	NLV	7 0E+7	NA	ID	ID
Antimony (B)	7440360	6 0 (A)	6 0 (A)	ID	NLV	NLV	75,000	NA	ID	ID
Arsenic (B)	7440382	50 (A)	50 (A)	150 (X)	NLV	NLV	4,700	NA	ID	ID
Barium (B)	7440393	2,000 (A)	2,000 (A)	190	NLV	NLV	1 5E+7	NA	ID	ID
Beryllium (B)	7440417	4 0 (A)	4 0 (A)	(G)	NLV	NLV	1 1E+6	NA	ID	ID
Boron (B)	7440428	500 (F)	500 (F)	1,900	NLV	NLV	6 8E+7	NA	ID	ID
Cadmium (B)	7440439	5 0 (A)	5 0 (A)	(G,X)	NLV	NLV	2 1E+5	NA	ID	ID
Chromium (III) (B,H)	16065831	100 (A)	100 (A)	(G X)	NLV	NLV	3 2E+8	NA	ID	ID
Chromium (VI) (B,H)	18540299	100 (A)	100 (A)	11	NLV	NLV	1 0E+6	NA	ID	ID
Cobalt (B)	7440484	50 (M)	100	100	NLV	NLV	1 1E+6	NA	ID	ID
Copper (B)	7440508	1,000 (E)	1,000 (E)	(G)	NLV	NLV	8 1E+6	NA	ID	ID
Iron (B)	7439896	300 (E)	300 (E)	NA	NLV	NLV	ID	NA	ID	ID
Lead (B)	7439921	4 0 (L)	4 0 (L)	(G,X)	NLV	NLV	ID	NA	ID	ID
Lithium (B)	7439932	170	350	25	NLV	NLV	6 0E+6	NA	ID	ID
Magnesium (B)	7439954	4 2E+5	1 2E+6	NA	NLV	NLV	1 0E+9 (D)	NA	ID	ID
Manganese (B)	7439965	50 (E)	50 (E)	(G X)	NLV	NLV	1 0E+7	NA	ID	ID
Mercury (Inorganic) (B)	7439976	2 0 (A)	2 0 (A)	2 0 (M)	NLV	NLV	56 (S)	56	ID	ID
Molybdenum (B)	7439987	37	100	800 (X)	NLV	NLV	1 1E+6	NA	ID	ID
Nickel (B)	7440020	100 (A)	100 (A)	(G)	NLV	NLV	1 6E+7	NA	ID	ID
Selenium (B)	7782492	50 (A)	50 (A)	5 0	NLV	NLV	1 1E+6	NA	ID	ID
Silver (B)	7440224	34	98	0 2 (M)	NLV	NLV	1 0E+6	NA	ID	ID
Sodium (B)	7440235	1 6E+5	4 5E+5	NA	NLV	NLV	1 0E+9 (D)	NA	ID	ID
Strontium (B)	7440246	4,600	13,000	760	NLV	NLV	1 3E+8	NA	ID	ID
Thallium (B)	7440280	2 0 (A)	2 0 (A)	3 7 (X)	NLV	NLV	14,000	NA	ID	ID
Vanadium (B)	7440622	64	180	12	NLV	NLV	1 9E+6	NA	ID	ID
White phosphorus (B,R)	12185103	0 11	0 31	NA	NLV	NLV	3,200	NA	ID	ID
Zinc (B)	7440666	2,400	5,000 (E)	(G)	NLV	NLV	7 0E+7	NA	ID	ID
PAHs										
Acenaphthene	83329	1,300	3,800	19	4,200 (S)	4,200 (S)	4,200 (S)	4,240	ID	ID

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Acenaphthylene	208968	26	75	ID	3,900 (S)	3,900 (S)	3,900 (S)	3,930	ID	ID
Anthracene	120127	43 (S)	43 (S)	ID	43 (S)	43 (S)	43 (S)	43 4	ID	ID
Benzo(a)anthracene (Q)	56553	5 0 (M)	5 0 (M)	NA	NLV	NLV	5 0 (M)	9 4	ID	ID
Benzo(b)fluoranthene (Q)	205992	5 0 (M)	5 0 (M)	ID	ID	ID	5 0 (M)	1 5	ID	ID
Benzo(k)fluoranthene (Q)	207089	5 0 (M)	5 0 (M)	NA	NLV	NLV	5 0 (M)	0 8	ID	ID
Benzo(g,h,i)perylene	191242	5 0 (M)	5 0 (M)	NA	NLV	NLV	5 0 (M)	0 26	ID	ID
Benzo(a)pyrene (Q)	50328	5 0 (M)	5 0 (M)	ID	NLV	NLV	5 0 (M)	1 62	ID	ID
beta-Chloronaphthalene	91587	1,800	5,200	NA	ID	ID	6,700 (S)	6,740	ID	ID
Chrysene (Q)	218019	5 0 (M)	5 0 (M)	ID	ID	ID	5 0 (M)	1 6	ID	ID
Dibenzo(a,h)anthracene (Q)	53703	5 0 (M)	5 0 (M)	ID	NLV	NLV	5 0 (M)	2 49	ID	ID
Dibenzofuran	132649	ID	ID	4 0	ID	ID	ID	10,000	ID	ID
Fluoranthene	206440	210 (S)	210 (S)	1 6	210 (S)	210 (S)	210 (S)	206	ID	ID
Fluorene	86737	880	2,000 (S)	12	2,000 (S)	2,000 (S)	2,000 (S)	1,980	ID	ID
Indeno(1 2,3-cd)pyrene (Q)	193395	5 0 (M)	5 0 (M)	ID	NLV	NLV	5 0 (M)	0 022	ID	ID
2-Methylnaphthalene	91576	260	750	ID	ID	ID	32,000	24,600	ID	ID
Naphthalene	91203	260	750	13	31,000 (S)	31,000 (S)	31,000 (S)	31,000	31,000 (S)	31,000 (S)
Phenanthrene	85018	26	75	5 0 (M)	1,000 (S)	1,000 (S)	1,000 (S)	1,000	ID	ID
Pyrene	129000	140 (S)	140 (S)	ID	140 (S)	140 (S)	140 (S)	135	ID	ID
SEMIVOLATILES										
Acetonitrile (I)	75058	140	400	NA	1 4E+8	2 0E+8 (S)	5 7E+6	2 00E+8	1 0E+7	2 0E+8 (S)
Acrylamide	79061	0 5 (M)	0 78	NA	NLV	NLV	8,700	2 20E+9	ID	ID
Acrylic acid (I)	79107	3,900	11,000	NA	1 2E+7	2 8E+7	7 4E+7	1 00E+9	1 0E+9 (D)	ID
Aniline (I)	62533	150	610	IP	NLV	NLV	3 7E+5	3 60E+7	ID	ID
Azobenzene	103333	7 7	32	NA	6,400 (S)	6,400 (S)	410	6,400	ID	ID
Benzidine	92875	0 3 (M)	0 3 (M)	ID	NLV	NLV	6 8	5 20E+5	ID	ID
Benzoic acid	65850	32,000	92,000	NA	NLV	NLV	3 5E+6 (S)	3 50E+6	ID	ID
Benzyl alcohol	100516	10,000	29,000	NA	NLV	NLV	4 4E+7 (S)	4 40E+7	ID	ID
bis(2-chloroethoxy)ethane	112265	ID	ID	NA	NLV	NLV	ID	1 89E+7	ID	ID
bis(2-Chloroethyl)ether (I)	111444	5 0 (M)	5 0 (M)	NA	38,000	2 1E+5	2,100	1 72E+7	1 7E+7 (S)	1 7E+7 (S)
Camphene (I)	79925	ID	ID	NA	ID	ID	ID	33,400	ID	ID

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Caprolactam	105602	5,800	17,000	NA	NLV	NLV	4 2E+8	5 25E+9	ID	1 0E+9 (D)
Carbazole	86748	43	170	10 (M)	NLV	NLV	2,900	7,480	ID	ID
Decabromodiphenyl ether	1163195	30 (S)	30 (S)	NA	30 (S)	30 (S)	30 (S)	30	ID	ID
Di(2-ethylhexyl) adipate	103231	400 (A)	400 (A)	NA	NLV	NLV	470 (S)	471	ID	ID
Diacetone alcohol (I)	123422	ID	ID	NA	NLV	NLV	ID	1 00E+9	1 0E+9 (D)	ID
1,2-Dichlorobenzene	95501	600 (A)	600 (A)	16	1 6E+5 (S)	1 6E+5 (S)	1 6E+5 (S)	1 56E+5	ID	1 6E+5 (S)
1,3-Dichlorobenzene	541731	600	600	38	ID	ID	1 1E+5 (S)	1 11E+5	ID	ID
1,4-Dichlorobenzene	106467	75 (A)	75 (A)	13	16,000	74,000 (S)	2,800	73,800	ID	ID
3,3'-Dichlorobenzidine	91941	1 9	7 7	0 3 (M,X)	NLV	NLV	270	3,110	ID	ID
2,6-Dichloro-4-nitroaniline	99309	2 200	6,300	NA	NLV	NLV	7,000 (S)	7,000	ID	ID
Diisopropylamine (I)	108189	5 6	16	NA	ID	ID	19,000	3 69E+7	2 3E+6	ID
Dimethyl phthalate	131113	73,000	2 1E+5	NA	NLV	NLV	4 2E+6 (S)	4 19E+6	ID	ID
N,N-Dimethylacetamide	127195	180	520	4,100 (X)	NLV	NLV	2 6E+7	1 00E+9	ID	ID
N,N-Dimethylaniline	121697	16	46	NA	2 4E+5	1 3E+6 (S)	16,000	1 27E+6	ID	1 3E+6 (S)
2,4-Dinitrotoluene	121142	5 0 (M)	5 1	NA	NLV	NLV	1,300	2 70E+5	ID	ID
1-Formylpiperidine	2591868	80	230	NA	ID	ID	ID	NA	ID	ID
Gentian violet	548629	8 5	35	NA	NLV	NLV	4 9E+5	1 00E+6	ID	ID
Hexabromobenzene	87821	10 (M)	10 (M)	ID	ID	ID	10 (M)	0 17	ID	ID
Hexachlorobenzene (C-66)	118741	1 0 (A)	1 0 (A)	ID	440	3,000	2 0	6,200	ID	ID
Hexachlorobutadiene (C-46)	87683	11	45	ID	1,600	3,200 (S)	200	3 230	ID	ID
alpha-Hexachlorocyclohexane	319846	0 14	0 55	NA	2,000 (S)	2,000 (S)	16	2,000	ID	ID
beta-Hexachlorocyclohexane	319857	0 47	1 9	NA	NLV	NLV	54	240	ID	ID
Hexachlorocyclopentadiene (C-56)	77474	50 (A)	50 (A)	ID	ID	ID	1,400	1,800	ID	ID
Hexachloroethane	67721	61	250	5 7 (X)	27,000	50,000 (S)	1,500	50,000	ID	ID
Isophorone	78591	900	3,700	570 (X)	NLV	NLV	1 1E+6	1 20E+7	ID	1 2E+7 (S)
2-Methoxyethanol (I)	109864	7 3	20	NA	NLV	NLV	9 1E+5	1 00E+9	ID	ID
N-Methyl-morpholine (I)	109024	20	56	NA	NLV	NLV	1 6E+6	1 00E+9	ID	ID
Methylcyclopentane (I)	96377	ID	ID	NA	ID	ID	ID	73,890	ID	ID
4,4'-Methylene-bis-2-chloroaniline (MBOCA)	101144	0 88	3 6	NA	NLV	NLV	71	14,000	ID	ID
Nitrobenzene (I)	98953	5 0 (M)	9 6	180 (X)	2 1E+6 (S)	2 1E+6 (S)	9,600	2 09E+6	ID	ID

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n-Nitroso-di-n-propylamine	621647	5 0 (M)	5 0 (M)	NA	NLV	NLV	220	9 89E+6	ID	ID
N-Nitrosodiphenylamine	86306	170	710	NA	NLV	NLV	30,000	35,100	ID	ID
Oxo-hexyl acetate	88230357	73	210	NA	ID	ID	ID	4 8E+5	ID	ID
Pentachlorobenzene	608935	6 1	17	NA	ID	ID	170	650	ID	ID
Pentachloronitrobenzene	82688	32 (S)	32 (S)	NA	32 (S)	32 (S)	32 (S)	32	ID	ID
Piperidine	110894	3 2	9 2	NA	NLV	NLV	32,000	1 00E+9	ID	ID
Propionic acid (I)	79094	18,000 (M)	35,000 (M)	ID	NLV	NLV	2 7E+8	1 00E+9	ID	ID
Pyridine (I)	110861	7 3	21	NA	5,500	12,000	90,000	3 00E+5	41,000	ID
1,2,4,5-Tetrachlorobenzene	95943	1,300 (S)	1,300 (S)	IP	ID	ID	1,300 (S)	1,300	ID	ID
p-Toluidine	106490	4 5	18	NA	NLV	NLV	6,500	7 60E+6	ID	ID
Tributylamine	102829	10	29	ID	14,000	75,000 (S)	680	75,400	ID	ID
1,2,4-Trichlorobenzene	120821	70 (A)	70 (A)	30	3 0E+5 (S)	3 0E+5 (S)	15,000	3 00E+5	ID	3 0E+5 (S)
Triphenyl phosphate	115866	1,200	1,400 (S)	NA	NLV	NLV	1,400 (S)	1,430	ID	ID
tris(2,3-Dibromopropyl)phosphate	126727	0 47	1 9	NA	4,700 (S)	4,700 (S)	1,500	4,700	ID	ID
PCBs										
Polychlorinated biphenyls (PCBs) (J,T)	1336363	0 5 (A)	0 5 (A)	0 2 (M)	45 (S)	45 (S)	2 3	44 7	ID	ID
PHTHALATES										
bis(2-Ethylhexyl)phthalate	117817	6 0 (A)	6 0 (A)	32	NLV	NLV	47	340	ID	340 (S)
Butyl benzyl phthalate	85687	1,200	2,700 (S)	14 (X)	NLV	NLV	2,700 (S)	2,690	ID	ID
Di-n-butyl phthalate	84742	880	2,500	9 7	NLV	NLV	11,000 (S)	11,200	ID	ID
Di-n-octyl phthalate	117840	130	380	ID	NLV	NLV	250	3,000	ID	ID
Dicyclohexyl phthalate	84617	ID	ID	NA	ID	ID	ID	4,000	ID	ID
Diethyl phthalate	84662	5,500	16,000	NA	NLV	NLV	1 1E+6 (S)	1 08E+6	ID	ID
PESTICIDES										
Alachlor	15972608	2 0 (A)	2 0 (A)	11 (X)	NLV	NLV	ID	1 83E+5	ID	ID
Aldrin	309002	0 05	0 2	NA	180 (S)	180 (S)	0 12	180	ID	ID
Atrazine	1912249	3 0 (A)	3 0 (A)	7 3 (X)	NLV	NLV	1,600	70,000	ID	ID
Chlordane (J)	57749	2 0 (A)	2 0 (A)	IP	56 (S)	56 (S)	11	56	ID	ID
Chlorpyrifos	2921882	22	63	NA	2 9	6 6	1,100 (S)	1,120	ID	ID
Cyanazine	21725462	10 (M)	10 (M)	56 (X)	NLV	NLV	1,700	1 70E+5	ID	ID

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Dacthal	1861321	73	210	NA	NLV	NLV	500 (S)	500	ID	ID
4-4'-DDD	72548	3 5	14	NA	NLV	NLV	12	90	ID	ID
4-4'-DDE	72559	2 5	10	NA	ID	ID	11	120	ID	ID
4-4'-DDT	50293	2 5	10	0 02 (M)	NLV	NLV	5 3	25	ID	ID
Diazinon	333415	1 3	3 8	NA	NLV	NLV	1,100	68,800	ID	ID
Dichlorovos	62737	2 9	12	NA	NLV	NLV	11,000	1 60E+7	ID	ID
Dieldrin	60571	0 053	0 22	0 02 (M)	200 (S)	200 (S)	0 9	195	ID	ID
Dinoseb	88857	7 0 (A)	7 0 (A)	NA	ID	ID	6,100	52,000	ID	ID
Diuron	330541	31	90	NA	NLV	NLV	37,000 (S)	37,300	ID	ID
Endosulfan (J)	115297	1 7	4 8	NA	ID	ID	510 (S)	510	ID	ID
Endothall	145733	100 (A)	100 (A)	NA	NLV	NLV	3 0E+7	1 00E+8	ID	ID
Endrin	72208	2 0 (A)	2 0 (A)	IP	NLV	NLV	120	250	ID	ID
Heptachlor	76448	0 4 (A)	0 4 (A)	NA	180 (S)	180 (S)	0 71	180	ID	ID
Heptachlor epoxide	1024573	0 2 (A)	0 2 (A)	NA	NLV	NLV	3 1	200	ID	ID
Lindane	58899	0 2 (A)	0 2 (A)	0 027	ID	ID	86	6,800	ID	ID
Methoxychlor	72435	40 (A)	40 (A)	NA	ID	ID	45 (S)	45	ID	ID
Methyl parathion	298000	1 8	5 2	NA	NLV	NLV	2 700	50,000	ID	ID
Metolachlor	51218452	160	670	NA	NLV	NLV	55,000	5 30E+5	ID	ID
Pendimethalin	40487421	280 (S)	280 (S)	NA	NLV	NLV	280 (S)	275	ID	ID
Prometon	1610180	160	460	NA	NLV	NLV	1 6E+5	7 50E+5	ID	ID
Propachlor	1918167	95	270	NA	NLV	NLV	4 2E+5	6 55E+5	ID	ID
Propazine	139402	200	560	NA	NLV	NLV	8,600 (S)	8,500	ID	ID
Simazine	122349	4 0 (A)	4 0 (A)	NA	NLV	NLV	4,500 (S)	4,470	ID	ID
Tebuthiuron	34014181	510	1,500	NA	NLV	NLV	2 5E+6 (S)	2 50E+6	ID	ID
Toxaphene	8001352	3 0 (A)	3 0 (A)	1 0 (M)	NLV	NLV	13	740	ID	740 (S)
Tnallate	2303175	95	270	NA	ID	ID	4,000 (S)	4,000	ID	ID
PESTICIDES-HERBICIDES										
Aldicarb	116063	3 0 (A)	3 0 (A)	NA	NLV	NLV	1 2E+5	6 00E+6	ID	ID
Aldicarb sulfoxide	1646873	4 0 (A)	4 0 (A)	NA	NLV	NLV	3 2E+6	2 80E-7	ID	ID
Aldicarb sulfone	1646884	2 0 (A)	2 0 (A)	NA	NLV	NLV	2 6E+6	7 80E+6	ID	ID

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Carbaryl	63252	700	2,000	NA	ID	ID	1 3E+5 (S)	1 26E+5	ID	ID
Carbofuran	1563662	40 (A)	40 (A)	NA	NLV	NLV	3 3E+5	7 00E+5	ID	ID
Dalapon	75990	200 (A)	200 (A)	NA	NLV	NLV	1 2E+7	5 02E+8	ID	ID
2,4-Dichlorophenoxyacetic acid	94757	70 (A)	70 (A)	220	NLV	NLV	1 1E+5	6 80E+5	ID	ID
Diquat	85007	20 (A)	20 (A)	NA	NLV	NLV	7 0E+5 (S)	7 00E+5	ID	ID
Glyphosate	1071836	700 (A)	700 (A)	NA	NLV	NLV	ID	1 16E+7	ID	ID
2-Methyl-4-chlorophenoxyacetic acid	94746	7 3	21	NA	NLV	NLV	8,200	9 24E+5	ID	ID
Oxamyl	23135220	200 (A)	200 (A)	NA	NLV	NLV	7 4E+7	2 80E+8	ID	ID
Picloram	1918021	500 (A)	500 (A)	NA	NLV	NLV	4 3E+5 (S)	4 30E+5	ID	ID
Silvex (2,4,5-TP)	93721	50 (A)	50 (A)	NA	NLV	NLV	37,000	1 40E+5	ID	ID
Trifluralin	1582098	110	450	NA	ID	ID	1,500	8,100	ID	ID
DIOXINS										
2,3,7,8-Tetrabromodibenzo-p-dioxin (O)	50585416	(O)	(O)	NA	NLV	NLV	1 0E-4 (M)	0 00996	ID	ID
2,3,7,8-Tetrachlorodibenzo-p-dioxin (O)	1746016	3 0E-5 (A)	3 0E-5 (A)	1 0E-5 (M)	NLV	NLV	1 0E-5 (M)	0 019	ID	ID
PHENOLS										
4-Chloro-3-methylphenol	59507	150	420	NA	NLV	NLV	62,000	3 90E+6	ID	ID
2-Chlorophenol	95578	45	130	22	ID	ID	82,000	2 20E+7	ID	ID
2 4-Dichlorophenol	120832	73	210	19	NLV	NLV	40,000	4 50E+6	ID	ID
2 4-Dimethylphenol	105679	370	1,000	12	NLV	NLV	4 4E+5	7 87E+6	ID	ID
2 6-Dimethylphenol	576261	5 0 (M)	13	NA	NLV	NLV	5,300	6 14E+6	ID	ID
3,4-Dimethylphenol	95658	10	29	NA	NLV	NLV	15,000	4 93E+6	ID	ID
2-Methyl-4,6-dinitrophenol	534521	20 (M)	20 (M)	NA	NLV	NLV	8,800	2 00E+5	ID	ID
2-Methylphenol	95487	370	1,000	82	NLV	NLV	7 1E+5	2 80E+7	ID	ID
3-Methylphenol	108394	370	1,000	NA	NLV	NLV	7 3E+5	2 30E+7	ID	ID
4-Methylphenol	106445	37	100	ID	NLV	NLV	75,000	2 30E+7	ID	ID
2-Nitrophenol	88755	20	58	ID	NLV	NLV	72,000	2 50E+6	ID	ID
Pentachlorophenol	87865	1 0 (A)	1 0 (A)	(G,X)	NLV	NLV	85	1 85E+6	ID	ID
Phenol	108952	4,400	13,000	210	NLV	NLV	2 8E+7	8 28E+7	ID	ID

GROUNDWATER: RESIDENTIAL AND INDUSTRIAL-COMMERCIAL

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

		#1	#2	#3	#4	#5	#6	#7	#8	#9
Chemical	Chemical Abstract Service Number	Residential & Commercial I Drinking Water Criteria	Industrial & Commercial II, III & IV Drinking Water Criteria	Groundwater Surface Water Interface Criteria	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria	Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation Criteria	Groundwater Contact Criteria (AA)	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level
2,4,5-Trichlorophenol	95954	730	2,100	NA	NLV	NLV	1 3E+5	1 20E+6	ID	ID
2,4,5-Trichlorophenol	88062	77	320	5 0 (M)	NLV	NLV	5,500	8 00E+5	ID	ID
3-Trifluoromethyl-4-nitrophenol	88302	4,500	13 000	NA	NLV	NLV	4 7E+6	5 00E+6	ID	ID
MISCELLANEOUS										
Ammonia	7664417	ID (N)	ID (N)	(AC)	3 2E+6	7 2E+6	ID	5 30E+8	ID	3 5E+6
Asbestos (AB)	1332214	7 0E+6 f/mL	7 0E+6 f/mL	NA	NLV	NLV	ID	NA	ID	ID
Chloride (B)	16887006	2 5E+5 (E)	2 5E+5 (E)	NA	NLV	NLV	ID	NA	ID	ID
Cyanide (B,R)	57125	200 (A)	200 (A)	20 (M)	NLV	NLV	6 5E+5	NA	ID	ID
Fluorine (soluble fluoride) (B)	7782414	2,000 (A,E)	2,000 (A,E)	NA	NLV	NLV	1 3E+7	NA	ID	ID
Nitrate (B,N)	14797558	10,000 (A,N)	10,000 (A,N)	NA	NLV	NLV	3 4E+8	NA	ID	ID
Nitrite (B,N)	14797650	1,000 (A,N)	1,000 (A,N)	NA	NLV	NLV	2 1E+7	NA	ID	ID
Phosphorus (total) (B)	7723140	63 000	2 4E+5	NA	NLV	NLV	ID	NA	ID	ID
Sulfate	14808798	2 5E+5 (E)	2 5E+5 (E)	NA	NLV	NLV	ID	NA	ID	ID
Urea	57136	ID (N)	ID (N)	NA	NLV	NLV	ID	NA	ID	ID
PBBs										
Polybrominated biphenyls (J)	37324235	0 096	0 39	IP	NLV	NLV	ID	1 66E+7	ID	ID
GLYCOLS										
Diethylene glycol monobutyl ether	112345	88	250	NA	NLV	NLV	4 3E+6	1 00E+9	ID	ID
Ethylene glycol	107211	15,000	42,000	NA	NLV	NLV	1 0E+9 (S)	1 00E+9	ID	1 0E+9 (D)
Ethylene glycol monobutyl ether	111762	200	560	NA	53,000	1 2E+5	2 8E+6	2 24E+8	ID	ID
Propylene glycol	57556	1 5E+5	4 2E+5	NA	NLV	NLV	1 0E+9 (D)	1 00E+9	ID	ID
CARBONYLS										
Acetaldehyde (I)	75070	950	2,700	NA	1 1E+6	2 3E+6	4 2E+7	1 00E+9	4 4E+6	2 6E+7
Cyclohexanone (I)	108941	33,000	94 000	NA	1,400	3,300	2 3E+7 (S)	2 30E+7	ID	ID
Formaldehyde	50000	1,300	3,800	120	63 000	3 6E+5	2 9E+7	5 50E+8	ID	61,000
LOW MOLECULAR WEIGHT ACID										
Acetic acid (I)	64197	18,000 (M)	18,000 (M)	18 000 (M)	NLV	NLV	1 8E+8	6 00E+9	4 8E+6	1 0E+9 (D)
Formic acid (I,U)	64186	18,000 (M)	29,000	ID	7 7E+6	1 5E+7	6 2E+8	1 00E+9	6 6E+8	3 5E+8

SOIL: RESIDENTIAL AND COMMERCIAL I

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS
Developed under the authority of the
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451, AS AMENDED

Residential and Commercial I soil criteria were calculated using currently available toxicological and chemical-specific data These criteria may change as new data become available They are not necessarily final cleanup standards Current criteria are available on the ERD Homepage at www deq state mi us/erd Scientific notation is represented by E+ or E- a value, for example 2 x 10^6 is reported as 2 0E+6 Please refer to Operational Memorandum #6 for analytical methods and method detection limits All values are expressed in units of parts per billion (ug/kg) Changes made since the last revision of the tables (January 1999) are shaded

			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
		#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
BTEX + MTBE												
Benzene (I)	71432	NA	100	4 000 (X)	1 9E+5	1,600	13 000	34 000	79 000	3 8E+8	88 000	4 0E+5
Ethylbenzene (I)	100414	NA	1,500	360	1 4E+5 (C)	1 4E+5 (C)	9 5E+6	1 4E+7	3 0E+7	6 7E+10	1 4E+5 (C)	1 4E+5
Methyl-tert-butyl ether (MTBE)	1634044	NA	800	15,000 (X)	6 0E+6 (C)	6 0E+6 (C)	2 6E+7	3 9E+7	8 7E+7	2 0E+11	8 5E+5	6 0E+6
Toluene (I)	108883	NA	16 000	2 800	2 5E+5 (C)	2 5E+5 (C)	2 8E+6	3 0E+7	3 0E+7	2 7E+10	2 5E+5 (C)	2 5E+5
Xylenes (I)	1330207	NA	5 600	700	1 5E+5 (C)	1 5E+5 (C)	4 6E+7	6 1E+7	1 3E+8	2 9E+11	1 5E+5 (C)	1 5E+5
VOLATILES												
Acetone (I)	67641	NA	15 000	34 000	1 1E+8 (C)	1 1E+8 (C)	1 3E+8	1 3E+8	1 9E+8	3 9E+11	1 1E+7	1 1E+8
Acrolein (I)	107028	NA	2,400	NA	2 3E+7 (C)	410	310	310	610	1 3E+6	1 8E+6	2 3E+7
Acrylonitrile (I)	107131	NA	32	98 (X)	1 6E+5	6 600	5 000	5 100	10,000	4 6E+7	4 700	8 3E+6
Benzyl chloride	100447	NA	100	NA	40 000	6 300	14,000	14 000	17 000	6 2E+7	15 000	2 3E+5
Bromobenzene (I)	108861	NA	530	NA	3 0E+5	3 1E+5	4 5E+5	4 5E+5	4 5E+5	5 3E+8	4 1E+4	7 6E+5
Bromodichloromethane	75274	NA	2,000 (W)	ID	2 2E+5	1,200	9 100	9 700	19 000	8 4E+7	41,000	1 5E+6
Bromoform	75252	NA	2 000 (W)	NA	8 7E+5 (C)	1 5E+5	9 0E+5	9 0E+5	9 0E+5	2 8E+9	3 2E+5	8 7E+5
Bromomethane	74839	NA	200	700	1 3E+6	860	11 000	57,000	1 4E+5	3 3E+8	1 5E+5	2 2E+6
n-Butanol (I)	71363	NA	19,000	NA	8 7E+6 (C)	NLV	NLV	NLV	NLV	2 3E+10	8 7E+6 (C)	8 7E+6
2-Butanone (MEK) (I)	78933	NA	2 6E+5	44 000	2 7E+7 (C)	2 7E+7 (C)	2 9E+7	2 9E+7	3 5E+7	6 7E+10	2 7E+7 (C)	2 7E+7
n-Butyl acetate (I)	123864	NA	11 000	NA	1 1E+6 (C)	1 1E+6 (C)	ID	ID	ID	6 3E+10	1 1E+6 (C)	1 1E+6
t-Butyl alcohol (I)	75650	NA	78 000	NA	1 1E+8 (C)	1 1E+8 (C)	ID	ID	ID	2 0E+11	5 9E+7	1 1E+8
n-Butylbenzene	104518	NA	1,600	NA	ID	ID	ID	ID	ID	ID	1 2E+6	1 0E+7
sec Butylbenzene	135988	NA	1,600	NA	ID	ID	ID	ID	ID	ID	1 2E+6	1 0E+7
tert-Butylbenzene (I)	98066	NA	1 600	NA	ID	ID	ID	ID	ID	ID	1 2E+6	1 0E+7

SOIL: RESIDENTIAL AND COMMERCIAL I

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
		#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Level	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
Carbon disulfide (I,R)	75150	NA	16,000	ID	2.8E+5 (C)	76,000	1.3E+6	7.9E+6	1.9E+7	4.7E+10	2.8E+5 (C)	2.8E+5
Carbon tetrachloride	56235	NA	100	900 (X)	32,000	190	3,500	12,000	28,000	1.3E+8	20,000	3.9E+5
Chlorobenzene (I)	108907	NA	2,000	940	2.6E+5 (C)	1.2E+5	7.7E+5	9.9E+5	2.1E+6	4.7E+9	2.6E+5 (C)	2.6E+5
Chloroethane (I)	75003	NA	4,400	ID	9.7E+5 (C)	9.7E+5 (C)	3.1E+7	1.2E+8	2.8E+8	6.7E+11	6.7E+5	9.7E+5
2-Chloroethyl vinyl ether	110758	NA	ID	NA	ID	ID	ID	ID	ID	ID	ID	1.9E+6
Chloroform	67663	NA	2,000 (W)	3,400 (X)	1.5E+6 (C)	7,200	45,000	1.2E+5	2.7E+5	1.3E+9	4.2E+5	1.5E+6
Chloromethane (I)	74873	NA	1,300	ID	1.1E+6 (C)	2,300	40,000	4.1E+5	1.0E+6	1.5E+9	2.0E+5	1.1E+6
o-Chlorotoluene (I)	95498	NA	3,300	NA	5.0E+5 (C)	5.0E+5 (C)	ID	ID	ID	1.7E+11	5.0E+5 (C)	5.0E+5
Dibromochloromethane	124481	NA	2,000 (W)	ID	1.9E+5	3,900	24,000	24,000	33,000	1.3E+8	31,000	6.1E+5
Dibromochloropropane	96128	NA	4.0	NA	1,200 (C)	1,200 (C)	1,200 (C)	1,200 (C)	1,200 (C)	1,200 (C)	300	1,200
Dibromomethane	74953	NA	1,600	NA	1.9E+6	ID	ID	ID	ID	ID	2.0E+6 (C)	2.0E+6
Dichlorodifluoromethane	75718	NA	93,000	ID	1.0E+6 (C)	9.0E+5	5.3E+7	5.5E+8	1.4E+9	3.3E+12	1.0E+6 (C)	1.0E+6
1,1-Dichloroethane (I)	75343	NA	18,000	IP	7.9E+5 (C)	7.9E+5 (C)	3.0E+7	9.5E+7	2.3E+8	5.4E+11	7.9E+5 (C)	7.9E+5
1,2-Dichloroethane (I)	107062	NA	100	7,200 (X)	2.2E+5	2,100	6,100	11,000	26,000	1.2E+8	26,000	1.2E+6
1,1-Dichloroethylene (I)	75354	NA	140	1,300 (X)	1.8E+5	62	1,100	5,300	13,000	6.2E+7	99,000	5.8E+5
cis-1,2-Dichloroethylene (I)	156592	NA	1,400	ID	6.4E+5 (C)	6.4E+5 (C)	4.0E+7	9.6E+7	2.2E+8	5.3E+11	6.4E+5 (C)	6.4E+5
trans-1,2-Dichloroethylene	156605	NA	2,000	ID	1.4E+6 (C)	1.4E+6 (C)	3.1E+7	9.4E+7	2.2E+8	5.3E+11	1.4E+6 (C)	1.4E+6
1,2-Dichloropropane (I)	78875	NA	100	5,800 (X)	1.5E+5	4,000	25,000	50,000	1.1E+5	2.7E+8	38,000	5.5E+5
1,3-Dichloropropene (I)	542756	NA	94	NA	5.2,00	79	1,100	5,200	12,000	6.0E+7	14,000	6.2E+5
Diethyl ether (I)	60297	NA	100 (M)	ID	7.4E+5 (C)	7.4E+6 (C)	8.1E+7	1.5E+8	3.4E+8	8.0E+11	7.4E+5 (C)	7.4E+6
Dimethylformamide (I)	68122	NA	14,000	NA	1.1E+8 (C)	NLV	NLV	NLV	NLV	2.0E+9	1.1E+7	1.1E+8
Dimethylsulfoxide	67685	NA	4.4E+6	3.8E+6	1.8E+7 (C)	NLV	NLV	NLV	NLV	ID	1.8E+7 (C)	1.8E+7
1,4-Dioxane (I)	123911	NA	1,500	56,000 (X)	3.4E+7	NLV	NLV	NLV	NLV	5.7E+8	2.3E+5	9.7E+7
Epichlorohydrin (I)	106898	NA	1,700	NA	7.3E+6 (C)	64,000	31,000	31,000	35,000	6.7E+7	2.6E+5	7.3E+6
Ethanol (I)	64175	NA	3.8E+7	IP	1.1E+8 (C)	NLV	NLV	NLV	NLV	1.3E+12	1.1E+8 (C)	1.1E+8
Ethyl acetate (I)	141786	NA	1.3E+5	NA	7.5E+6 (C)	7.5E+6 (C)	4.9E+7	4.9E+7	9.8E+7	2.1E+11	7.5E+6 (C)	7.5E+6
Ethylene dibromide	106934	NA	10 (M)	NA	320	670	1,700	1,700	3,300	1.4E+7	30	8.9E+5
n-Heptane (I)	142825	NA	2.4E+5 (C)	NA	2.4E+5 (C)	2.4E+5 (C)	ID	ID	ID	2.3E+11	2.4E+5 (C)	2.4E+5
n-Hexane (I)	110543	NA	44,000 (C)	NA	44,000 (C)	44,000 (C)	ID	ID	ID	1.3E+10	44,000 (C)	44,000
2-Hexanone (I)	591786	NA	20,000	NA	2.5E+6 (C)	9.9E+5	ID	ID	ID	2.7E+9	2.5E+6 (C)	2.5E+6

SOIL: RESIDENTIAL AND COMMERCIAL I

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
		#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
Isobutyl alcohol (I)	78831	NA	46 000	NA	8 9E+6 (C)	8 9E+6 (C)	7 9E+7	7 9E+7	7 9E+7	1 0E+11	8 9E+6 (C)	8 9E+6
Isopropyl alcohol (I)	67630	NA	9 400	NA	1 1E+8 (C)	NLV	NLV	NLV	NLV	1 5E+10	7 0E+6	1 1E+8
Isopropyl benzene (I)	98828	NA	90 000	ID	3 9E+5 (C)	3 9E+5 (C)	1 7E+6	ID	ID	5 8E+9	3 9E+5 (C)	3 9E+5
Methane	74828	NA	ID	ID	ID	(K)	ID	ID	ID	ID	ID	ID
Methanol (I)	67561	NA	74 000	ID	3 1E+6 (C)	5 0E+5	3 1E+7	4 4E+7	9 6E+7	2 2E+11	3 1E+6 (C)	3 1E+6
4-Methyl-2-pentanone (MIBK) (I)	108101	NA	36,000	ID	2 7E+6 (C)	2 7E+6 (C)	4 5E+7	4 5E+7	6 7E+7	1 4E+11	2 7E+6 (C)	2 7E+6
Methylene chloride	75092	NA	100	19 000 (X)	2 2E+6	45 000	2 1E+5	5 9E+5	1 4E+6	6 6E+9	3 4E+5	2 3E+6
Pentane (I)	109660	NA	ID	NA	ID	2 4E+5 (C)	ID	ID	ID	1 2E+12	ID	2 4E+5
2 Pentene (I)	109682	NA	ID	NA	ID	ID	ID	ID	ID	ID	ID	2 2E+5
Propyl alcohol (I)	71238	NA	28 000	NA	1 1E+8 (C)	NLV	NLV	NLV	NLV	4 9E+10	2 1E+7	1 1E+8
n-Propylbenzene (I)	103651	NA	1,600	NA	ID	ID	ID	ID	ID	1 3E+9	1 2E+6	1 0E+7
Styrene (I)	100425	NA	2,700	2 200	85 000	2 4E+5	9 4E+5	9 4E+5	1 4E+6	5 3E+9	85 000	5 2E+5
1 1 1 2-Tetrachloroethane	630206	NA	660	NA	2 2E+5	12 000	57 000	65 000	1 1E+5	4 2E+8	99 000	9 8E+5
1 1 2 2-Tetrachloroethane	79345	NA	86	1 600 (X)	42 000	4 300	10 000	10 000	11,000	5 4E+7	13 000	8 7E+5
Tetrachloroethylene	127184	NA	100	900 (X)	88 000 (C)	11 000	1 8E+5	4 8E+5	1 1E+6	5 4E+9	50 000	88 000
Tetrahydrofuran (I)	109999	NA	4 800	2 2E+5 (X)	7 8E+7	1 30E+06	ID	ID	ID	3 9E+11	3 6E+6	1 2E+8
1 1 1-Trichloroethane	71556	NA	4,000	4,000	4 6E+5 (C)	2 5E+5	3 8E+6	1 4E+7	3 0E+7	6 7E+10	4 6E+5 (C)	4 6E+5
1 1 2-Trichloroethane	79005	NA	100	6 600 (X)	1 9E+5	4 600	17 000	18 000	42,000	1 9E+8	45 000	9 2E+5
Trichloroethylene	79016	NA	100	4,000 (X)	2 0E+5	7 000	78,000	1 5E+5	3 8E+5	1 8E+9	1 6E+5	5 0E+5
Trichlorofluoromethane	75694	NA	52 000	NA	5 6E+5 (C)	5 6E+5 (C)	9 2E+7	1 2E+11	1 2E+11	3 8E+12	5 6E+5 (C)	5 6E+5
1 2 3-Trichloropropane	96184	NA	840	NA	9 3E+5 (C)	ID	ID	ID	ID	ID	8 3E+5 (C)	8 3E+5
1 1 2-Trichloro-1 2 2-trifluoroethane	76131	NA	5 6E+5 (C)	NA	5 6E+5 (C)	5 6E+5 (C)	1 8E+8	8 8E+8	2 1E+9	5 1E+12	5 6E+5 (C)	5 6E+5
Triethanolamine	102716	NA	74 000	NA	1 1E+8 (C)	NLV	NLV	NLV	NLV	3 3E+9	5 5E+7	1 1E+8
2 2 4-Trimethyl pentane	540841	NA	ID	NA	ID	ID	ID	ID	ID	ID	ID	19 000
2 2 4-Trimethyl-2-pentene (I)	107404	NA	ID	NA	ID	ID	ID	ID	ID	ID	ID	56 000
1 2 4-Trimethylbenzene (I)	95636	NA	2 100	ID	1 1E+5 (C)	1 1E+5 (C)	2 1E+7	5 0E+8	5 0E+8	8 2E+10	1 1E+5 (C)	1 1E+5
1 3 5-Trimethylbenzene (I)	108678	NA	1,800	ID	94,000 (C)	94 000 (C)	1 6E+7	3 8E+8	3 8E+8	8 2E+10	94 000 (C)	94 000
Vinyl acetate (I)	108054	NA	13 000	NA	2 4E+6 (C)	7 9E+5	1 7E+6	2 6E+6	5 8E+6	1 3E+10	2 4E+6 (C)	2 4E+6
Vinyl chloride	75014	NA	40	300	5,800	28	440	3,100	7 600	3 7E+7	1 200	4 9E+5

SOIL: RESIDENTIAL AND COMMERCIAL I

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
		#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
INORGANICS												
Aluminum (B)	7429905	6 9E+6	1 000	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	4 2E+7	NA
Antimony (B)	7440360	NA	4 300	ID	5 4E+7	NLV	NLV	NLV	NLV	3 3E+8	1 5E+5	NA
Arsenic (B)	7440382	5 800	23 000	70 000 (X)	2 2E+6	NLV	NLV	NLV	NLV	7 2E+5	6 600	NA
Barium (B)	7440393	75 000	1 3E+6	1 3E+5	1 0E+9 (D)	NLV	NLV	NLV	NLV	3 3E+8	3 0E+7	NA
Beryllium (B)	7440417	NA	51,000	(G)	1 0E+9 (D)	NLV	NLV	NLV	NLV	1 3E+6	2 1E+6	NA
Boron (B)	7440428	NA	10 000	38,000	2 6E+8	NLV	NLV	NLV	NLV	ID	2 2E+6	NA
Cadmium (B)	7440439	1 200	6,000	(G X)	2 5E+8	NLV	NLV	NLV	NLV	1 7E+6	4 2E+5	NA
Chromium (III) (B H)	16065831	18 000 (total)	1 0E+9 (D)	(G X)	1 0E+9 (D)	NLV	NLV	NLV	NLV	3 3E+8	6 3E+8	NA
Chromium (VI) (B H)	18540299	18 000 (total)	30 000	3,300	3 0E+8	NLV	NLV	NLV	NLV	2 6E+5	2 0E+6	NA
Cobalt (B)	7440484	6 800	1 000	2 000	2 2E+7	NLV	NLV	NLV	NLV	1 3E+7	2 1E+6	NA
Copper (B)	7440508	32 000	1 6E+8	(G)	1 0E+9 (D)	NLV	NLV	NLV	NLV	1 3E+8	1 6E+7	NA
Iron (B)	7439896	1 2E+7	6,000	NA	ID	NLV	NLV	NLV	NLV	ID	ID	NA
Lead (B)	7439921	21 000	1,000 (M)	(G M X)	ID	NLV	NLV	NLV	NLV	1 0E+8	4 0E+5	NA
Lithium (B)	7439932	9 800	3 400	500	1 2E+8	NLV	NLV	NLV	NLV	ID	1 9E+7	NA
Magnesium (B)	7439954	NA	8 4E+6	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	6 7E+9	1 0E+9 (D)	NA
Manganese (B)	7439965	4 4E+5	2,000 (M)	(G,X)	2 0E+8	NLV	NLV	NLV	NLV	3 3E+6	2 0E+7	NA
Mercury (Inorganic) (B)	7439976	130	1 700	170	47 000	NLV	NLV	NLV	NLV	ID	1 3E+5	NA
Molybdenum (B)	7439987	NA	740	16,000 (X)	2 2E+7	NLV	NLV	NLV	NLV	ID	2 1E+6	NA
Nickel (B)	7440020	20 000	1 0E+5	(G)	1 0E+9 (D)	NLV	NLV	NLV	NLV	1 3E+7	3 2E+7	NA
Selenium (B)	7782492	410	4,000	400	8 8E+7	NLV	NLV	NLV	NLV	1 3E+8	2 1E+6	NA
Silver (B)	7440224	1 000	4,500	500 (M)	2 3E+8	NLV	NLV	NLV	NLV	6 7E+6	2 0E+6	NA
Sodium (B)	7440235	NA	3 2E+6	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	1 0E+9 (D)	NA
Strontium (B)	7440246	NA	92,000	15,000	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	2 7E+8	NA
Thallium (B)	7440280	NA	2 300	4 200 (X)	1 6E+7	NLV	NLV	NLV	NLV	ID	28 000	NA
Vanadium (B)	7440622	NA	1 0E+6	240	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	3 7E+6	NA
White phosphorus (B R)	12185103	NA	100 (M)	NA	64 00	NLV	NLV	NLV	NLV	ID	6 300	NA
Zinc (B)	7440666	47 000	2 4E+6	(G)	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	1 4E+8	NA

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			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
		#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
PAHs												
Acenaphthene	83329	NA	3 0E+5	4 300	9 6E+5	1 9E+8	8 1E+7	8 1E+7	8 1E+7	1 4E+10	7 6E+7	NA
Acenaphthylene	208968	NA	2 900	ID	4 4E+5	1 6E+6	2 2E+6	2 2E+6	2 2E+6	2 3E+9	1 5E+6	NA
Anthracene	120127	NA	41 000	ID	41,000	1 0E+9 (D)	1 4E+9	1 4E+9	1 4E+9	6 7E+10	4 2E+8	NA
Benzo(a)anthracene (Q)	56553	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	14 000	NA
Benzo(b)fluoranthene (Q)	205992	NA	NLL	NLL	NLL	ID	ID	ID	ID	ID	14 000	NA
Benzo(k)fluoranthene (Q)	207089	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	1 4E+5	NA
Benzo(g h i)perylene	191242	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	8 0E+8	1 5E+6	NA
Benzo(a)pyrene (Q)	50328	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1 5E+6	1 400	NA
beta-Chloronaphthalene	91587	NA	6 5E+5	NA	2 3E+6	ID	ID	ID	ID	ID	2 7E+7	NA
Chrysene (Q)	218019	NA	NLL	NLL	NLL	ID	ID	ID	ID	ID	1 4E+6	NA
Dibenzo(a h)anthracene (Q)	53703	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	1 400	NA
Dibenzofuran	132649	NA	ID	1 700	ID	ID	ID	ID	ID	ID	ID	NA
Fluoranthene	206440	NA	7 2E+5	5 500	7 2E+5	1 0E+9 (D)	7 4E+8	7 4E+8	7 4E+8	9 3E+9	5 1E+7	NA
Fluorene	86737	NA	3 9E+5	2,400	8 9E+5	5 8E+8	1 3E+8	1 3E+8	1 3E+8	9 3E+9	5 1E+7	NA
Indeno(1 2 3-cd)pyrene (Q)	193395	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	14 000	NA
2-Methylnaphthalene	91576	NA	57 000	ID	7 1E+6	ID	ID	ID	ID	ID	1 5E+7	NA
Naphthalene	91203	NA	17,000	850	2 0E+6	4 9E+7	4 9E+7	4 9E+7	4 9E+7	3 3E+10	1 5E+7	NA
Phenanthrene	85018	NA	12 000	2,300	4 5E+5	1 5E+7	1 3E+5	6 2E+5	6 2E+5	1 3E+8	1 5E+6	NA
Pyrene	129000	NA	4 7E+5	ID	4 7E+5	1 0E+9 (D)	6 5E+8	6 5E+8	6 5E+8	6 7E+9	3 2E+7	NA
SEMIVOLATILES												
Acetonitrile (I)	75058	NA	2,800	NA	2 2E+7 (C)	2 2E+7 (C)	9 2E+6	9 2E+6	1 2E+7	2 3E+10	2 1E+6	2 2E+7
Acrylamide	79061	NA	10	NA	1 7E+5	NLV	NLV	NLV	NLV	2 4E+6	2,200	NA
Acrylic acid (I)	79107	NA	78 000	NA	1 3E+8 (C)	2 6E+6	2 2E+5	2 3E+5	2 3E+5	6 7E+7	5 8E+7	1 3E+8
Aniline (I)	62533	NA	3,000	IP	4 5E+6 (C)	NLV	NLV	NLV	NLV	6 7E+7	1 7E+6	4 5E+6
Azobenzene	103333	NA	1,400	NA	76,000	1 1E+5	ID	ID	ID	1 0E+8	90 000	NA
Benzidine	92875	NA	1 000 (M)	ID	1,000 (M)	NLV	NLV	NLV	NLV	46 000	1,000 (M)	NA
Benzoic acid	65850	NA	6 4E+5	NA	7 0E+7	NLV	NLV	NLV	NLV	ID	1 0E+9 (D)	NA
Benzyl alcohol	100516	NA	2 0E+5	NA	5 8E+6 (C)	NLV	NLV	NLV	NLV	3 3E+11	5 8E+6 (C)	5 8E+6
bis(2-chloroethoxy)ethane	112265	NA	ID	NA	ID	NLV	NLV	NLV	NLV	ID	ID	2 7E+6

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			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
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Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
bis(2-Chloroethyl)ether (I)	111444	NA	330 (M)	NA	42 000	8 300	3 800	3 800	3 800	9 4E+6	2,300	2 2E+6
Camphene (I)	79925	NA	ID	NA	ID	ID	ID	ID	ID	ID	ID	NA
Caprolactam	105602	NA	1 2E+5	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	6 7E+8	3 4E+8	NA
Carbazole	86748	NA	860	330 (M)	3 2E+5	NLV	NLV	NLV	NLV	ID	1 3E+5	NA
Decabromodiphenyl ether	1163195	NA	1 4E+5	NA	1 4E+5	1 0E+9 (D)	ID	ID	ID	2 3E+9	4 2E+6	NA
Di(2-ethylhexyl) adipate	103231	NA	9 6E+5 (C)	NA	9 6E+5 (C)	NLV	NLV	NLV	NLV	ID	9 6E+5 (C)	9 6E+5
Diacetone alcohol (I)	123422	NA	ID	NA	ID	NLV	NLV	NLV	NLV	1 6E+11	ID	1 1E+8
1 2-Dichlorobenzene	95501	NA	13 000	340	2 1E+5 (C)	2 1E+5 (C)	3 9E+7	3 9E+7	5 2E+7	1 0E+11	2 1E+5 (C)	2 1E+5
1 3 Dichlorobenzene	541731	NA	17 000	1 100	2 0E+5 (C)	ID	ID	ID	ID	ID	2 0E+5 (C)	2 0E+5
1 4-Dichlorobenzene	106467	NA	1,600	280	60 000	19 000	77,000	77 000	1 1E+5	4 5E+8	1 1E+5	NA
3 3 -Dichlorobenzidine	91941	NA	2 000 (M)	2 000 (M,X)	6,900	NLV	NLV	NLV	NLV	6 5E+6	5 700	NA
2 6-Dichloro-4-nitroaniline	99309	NA	44,000	NA	1 4E+5	NLV	NLV	NLV	NLV	ID	1 3E+8	NA
Diisopropylamine (I)	108189	NA	110	NA	3 8E+5	ID	ID	ID	ID	ID	85 000	6 7E+6
Dimethyl phthalate	131113	NA	7 9E+5 (C)	NA	7 9E+5 (C)	NLV	NLV	NLV	NLV	3 3E+9	7 9E+5 (C)	7 9E+5
N N-Dimethylacetamide	127195	NA	3 600	82,000 (X)	1 1E+8 (C)	NLV	NLV	NLV	NLV	ID	2 7E+6	1 1E+8
N N Dimethylaniline	121697	NA	320	NA	3 2E+5	1 7E+5	ID	ID	ID	2 6E+8	2 4E+5	8 0E+5
2 4 Dinitrotoluene	121142	NA	15,000	NA	3 8E+5	NLV	NLV	NLV	NLV	1 6E+7	15 000	NA
1 Formylpiperidine	2591868	NA	1 600	NA	ID	ID	ID	ID	ID	ID	1 2E+6	1 0E+7
Gentian violet	548629	NA	170	NA	9 8E+6	NLV	NLV	NLV	NLV	ID	99 000	NA
Hexabromobenzene	87821	NA	5,400	ID	1 0E+7	ID	ID	ID	ID	ID	1 2E+6	NA
Hexachlorobenzene (C-66)	118741	NA	1,800	ID	3 500	41,000	16 000	16 [illegible]	16 000	6 8E+6	6 200	NA
Hexachlorobutadiene (C-46)	87683	NA	19 000	ID	3 4E+5	1 3E+5	1 3E+5	1 3E+5	1 3E+5	1 4E+8	1 3E+5	3 5E+5
alpha-Hexachlorocyclohexane	319846	NA	25	NA	2 800	1 3E+5	25 000	25 000	25 000	1 7E+6	1 600	NA
beta-Hexachlorocyclohexane	319857	NA	85	NA	10 000	NLV	NLV	NLV	NLV	5 9E+6	5 500	NA
Hexachlorocyclopentadiene (C-56)	77474	NA	36 000	ID	81 000 (C)	ID	ID	ID	ID	ID	81 000 (C)	81 000
Hexachloroethane	67721	NA	17 000	1 800 (X)	4 1E+5	1 9E+5	1 2E+6	1 2E+6	1 2E+6	2 3E+8	1 8E+5	NA
Isophorone	78591	NA	12 000	11,000 (X)	2 4E+6 (C)	NLV	NLV	NLV	NLV	1 9E+10	2 4E+6 (C)	2 4E+6
2-Methoxyethanol (I)	109864	NA	150	ID	1 9E+7	NLV	NLV	NLV	NLV	1 3E+9	1 1E+5	1 1E+8
N-Methyl-morpholine (I)	109024	NA	400	NA	3 2E+7	NLV	NLV	NLV	NLV	ID	3 0E+5	1 1E+8

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		#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
Methylcyclopentane (I)	96377	NA	ID	NA	ID	ID	ID	ID	ID	ID	ID	3 4E+5
4 4'-Methylene bis-2-chloroaniline (MBOCA)	101144	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	8 4E+7	10 000	NA
Nitrobenzene (I)	98953	NA	330 (M)	3 600 (X)	1 9E+5	4 9E+5 (C)	3 9E+6	3 9E+6	3 9E+6	3 3E+9	51 000	4 9E+5
n Nitroso-di-n propylamine	621647	NA	330 (M)	NA	4 400	NLV	NLV	NLV	NLV	1 6E+6	370	1 5E+6
N Nitrosodiphenylamine	86306	NA	3,400	NA	6 0E+5	NLV	NLV	NLV	NLV	ID	5 2E+5	NA
Oxo-hexyl acetate	88230357	NA	1 500	NA	ID	ID	ID	ID	ID	5 4E+9	1 1E+6	1 0E+7
Pentachlorobenzene	608935	NA	29 000	NA	1 9E+5 (C)	ID	ID	ID	ID	ID	1 9E+5 (C)	1 9E+5
Pentachloronitrobenzene	82688	NA	37,000	NA	37 000	1 2E+5	2 3E+5	2 3E+5	2 3E+5	3 3E+8	3 2E+6	NA
Piperidine	110894	NA	64	NA	6 4E+5	NLV	NLV	NLV	NLV	9 3E+9	48,000	1 2E+8
Propionic acid (I)	79094	NA	3 6E+5	NA	1 1E+8 (C)	NLV	NLV	NLV	NLV	2 0E+10	1 1E+8 (C)	1 1E+8
Pyridine (I)	110861	NA	330 (M)	NA	37,000 (C)	1,100	8,200	40,000	97 000	2 3E+8	37 000 (C)	37 000
1,2,4,5-Tetrachlorobenzene	95943	NA	1 5E+6	IP	1 5E+6	ID	ID	ID	ID	ID	1 4E+8	NA
p-Toluidine	106490	NA	660 (M)	NA	1 3E+5	NLV	NLV	NLV	NLV	1 0E+8	52 000	1 2E+6
Tributylamine	102829	NA	7,800	ID	5 3E+5	5 8E+5	ID	ID	ID	4 7E+8	1 5E+5	3 7E+6
1,2,4-Trichlorobenzene	120821	NA	4,200	1,800	8 9E+5	1 1E+6 (C)	2 8E+7	2 8E+7	2 8E+7	2 5E+10	1 1E+6 (C)	1 1E+6
Triphenyl phosphate	115866	NA	1 1E+5 (C)	NA	1 1E+5 (C)	ID	ID	ID	ID	ID	1 1E+5 (C)	1 1E+5
tris(2 3 Dibromopropyl)phosphate	126727	NA	43	NA	27,000 (C)	27 000 (C)	18 000	18,000	18,000	5 9E+6	5,500	27 000
PCBs												
Polychlorinated biphenyls (PCBs) (J T)	1336363	NA	NLL	NLL	NLL	3 0E+6	2 4E+5	7 9E+6	7 9E+6	5 2E+6	(T)	NA
PHTHALATES												
bis(2-Ethylhexyl)phthalate	117817	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	7 0E+8	7 0E+5	1 0E+7
Butyl benzyl phthalate	85687	NA	3 1E+5 (C)	26,000 (X)	3 1E+5 (C)	NLV	NLV	NLV	NLV	4 7E+10	3 1E+5 (C)	3 1E+5
Di-n-butyl phthalate	84742	NA	7 6E+5 (C)	11,000	7 6E+5 (C)	NLV	NLV	NLV	NLV	3 3E+9	7 6E+5 (C)	7 6E+5
Di-n-octyl phthalate	117840	NA	1 0E+8	ID	1 4E+8 (C)	NLV	NLV	NLV	NLV	ID	7 6E+6	1 4E+8
Dicyclohexyl phthalate	84617	NA	ID	NA	ID	ID	ID	ID	ID	ID	ID	NA
Diethyl phthalate	84662	NA	1 1E+5	NA	7 4E+5 (C)	NLV	NLV	NLV	NLV	3 3E+9	7 4E+5 (C)	7 4E+5
PESTICIDES												
Alachlor	15972608	NA	52	290 (X)	ID	NLV	NLV	NLV	NLV	ID	1 2E+5	NA
Aldrin	309002	NA	NLL	NLL	NLL	1 3E+6	58 000	58 000	58 000	6 4E+5	580	NA
Atrazine	1912249	NA	60	150 (X)	32 000	NLV	NLV	NLV	NLV	ID	45 000	NA

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			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
		#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
Chlordane (J)	57749	NA	NLL	NLL	NLL	1 1E+7	1 2E+6	1 2E+6	1 2E+6	3 1E+7	1 7E+4	NA
Chlorpyrifos	2921882	NA	17,000	NA	8 4E+5	ID	ID	ID	ID	1 3E+8	1 3E+6	NA
Cyanazine	21725462	NA	500 (M)	1 100 (X)	34 000	NLV	NLV	NLV	NLV	ID	17 000	NA
Dacthal	1861321	NA	50 000	NA	3 4E+5	NLV	NLV	NLV	NLV	ID	4 2E+6	NA
4-4 -DDD	72548	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	41,000	NA
4-4' DDE	72559	NA	NLL	NLL	NLL	ID	ID	ID	ID	ID	29 000	NA
4-4 DDT	50293	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	3 2E+7	29 000	NA
Diazinon	333415	NA	95	NA	80 000	NLV	NLV	NLV	NLV	ID	76,000	3 1E+5
Dichlorovos	62737	NA	58	NA	2 2E+5	NLV	NLV	NLV	NLV	3 3E+7	34 000	2 5E+6
Dieldrin	60571	NA	NLL	NLL	NLL	1 4E+5	19 000	19 000	19,000	6 8E+5	620	NA
Dinoseb	88857	NA	290	NA	1 4E+5 (C)	ID	ID	ID	ID	ID	1 4E+5 (C)	1 4E+5
Diuron	330541	NA	620	NA	7 5E+5	NLV	NLV	NLV	NLV	ID	1 8E+6	NA
Endosulfan (J)	115297	NA	NLL	NLL	NLL	ID	ID	ID	ID	ID	97 000	NA
Endothall	145733	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	2 3E+9	7 2E+6	NA
Endrin	72208	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	72,000	NA
Heptachlor	76448	NA	NLL	NLL	NLL	3 5E+5	61,000	61,000	61 000	2 4E+6	2 200	NA
Heptachlor epoxide	1024573	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1 2E+6	1 100	NA
Lindane	58899	NA	20 (M)	20 (M)	3 700	ID	ID	ID	ID	ID	7 600	NA
Methoxychlor	72435	NA	1 3E+5	NA	1 4E+5	ID	ID	ID	ID	ID	2 1E+6	NA
Methyl parathion	298000	NA	44	NA	66 000	NLV	NLV	NLV	NLV	ID	1 1E+5	NA
Metolachlor	51218452	NA	3 200	NA	4 4E+5 (C)	NLV	NLV	NLV	NLV	ID	4 4E+5 (C)	4 4E+5
Pendimethalin	40487421	NA	1 1E+6	NA	1 1E+6	NLV	NLV	NLV	NLV	ID	5 1E+7	NA
Prometon	1610180	NA	4 900	NA	4 9E+6	NLV	NLV	NLV	NLV	ID	9 3E+6	NA
Propachlor	1918167	NA	1 900	NA	8 4E+5	NLV	NLV	NLV	NLV	ID	5 5E+6	NA
Propazine	139402	NA	4 000	NA	1 7E+5	NLV	NLV	NLV	NLV	ID	1 1E+7	NA
Simazine	122349	NA	80	NA	90 000	NLV	NLV	NLV	NLV	ID	2 2E+6	NA
Tebuthiuron	34014181	NA	10,000	NA	5 0E+7	NLV	NLV	NLV	NLV	ID	3 0E+7	NA
Toxaphene	8001352	NA	2 600	860	11 000	NLV	NLV	NLV	NLV	9 7E+6	2 300	NA
Triallate	2303175	NA	95,000	NA	2 5E+5 (C)	ID	ID	ID	ID	ID	2 5E+5 (C)	2 5E+5

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			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
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PESTICIDES-HERBICIDES												
Aldicarb	116063	NA	60	NA	2 4E+6	NLV	NLV	NLV	NLV	ID	4 2E+5	NA
Aldicarb sulfoxide	1646873	NA	80	NA	6 4E+7	NLV	NLV	NLV	NLV	ID	5 5E+5	NA
Aldicarb sulfone	1646884	NA	50 (M)	NA	5 2E+7	NLV	NLV	NLV	NLV	ID	4 6E+5	NA
Carbaryl	63252	NA	14 000	NA	2 6E+6	ID	ID	ID	ID	ID	4 1E+7	NA
Carbofuran	1563662	NA	800	NA	6 6E+6	NLV	NLV	NLV	NLV	ID	5 5E+5	NA
Dalapon	75990	NA	4,000	NA	5 9E+7 (C)	NLV	NLV	NLV	NLV	ID	9 3E+6	5 9E+7
2 4-Dichlorophenoxyacetic acid	94757	NA	1 400	4 400	2 2E+6	NLV	NLV	NLV	NLV	6 7E+9	4 2E+6	NA
Diquat	85007	NA	400	NA	1 4E+7	NLV	NLV	NLV	NLV	ID	9 3E+5	NA
Glyphosate	1071836	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	4 2E+7	NA
2 Methyl-4-chlorophenoxyacetic acid	94746	NA	390	NA	4 3E+5	NLV	NLV	NLV	NLV	ID	4 2E+5	NA
Oxamyl	23135220	NA	4,000	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	1 6E+7	NA
Picloram	1918021	NA	10,000	NA	ID	NLV	NLV	NLV	NLV	ID	3 0E+7	NA
Silvex (2 4 5-TP)	93721	NA	3,700	NA	2 8E+6	NLV	NLV	NLV	NLV	ID	3 2E+6	NA
Trifluralin	1582098	NA	5 7E+5	NA	7 8E+6	ID	ID	ID	ID	ID	1 3E+6	NA
DIOXINS												
2 3 7 8-Tetrabromodibenzo-p-dioxin (O)	50585416	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	(O)	(O)	NA
2 3 7 8-Tetrachlorodibenzo-p-dioxin (O)	1746016	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	71	0 09	NA
PHENOLS												
4 Chloro-3-methylphenol	59507	NA	5 600	NA	2 4E+6	NLV	NLV	NLV	NLV	ID	2 2E+6	NA
2-Chlorophenol	95578	NA	900	440	1 6E+6	ID	ID	ID	ID	ID	6 8E+5	8 1E+6
2 4-Dichlorophenol	120832	NA	2,600	680	1 5E+6	NLV	NLV	NLV	NLV	5 1E+9	4 2E+6	1 0E+7
2 4-Dimethylphenol	105679	NA	7,400	330 (M)	8 8E+6	NLV	NLV	NLV	NLV	4 7E+9	2 1E+7	NA
2 6-Dimethylphenol	576261	NA	330 (M)	NA	1 1E+5	NLV	NLV	NLV	NLV	ID	2 5E+5	NA
3 4-Dimethylphenol	95658	NA	330 (M)	NA	3 0E+5	NLV	NLV	NLV	NLV	ID	5 9E+5	NA
2-Methyl-4 6-dinitrophenol	534521	NA	1,700 (M)	NA	1 8E+5	NLV	NLV	NLV	NLV	ID	1 5E+5	NA
2-Methylphenol	95487	NA	7 400	1,600	1 4E+7	NLV	NLV	NLV	NLV	6 7E+9	5 5E+6	NA
3-Methylphenol	108394	NA	7,400	NA	4 5E+6 (C)	NLV	NLV	NLV	NLV	ID	4 5E+6 (C)	4 5E+6
4-Methylphenol	106445	NA	740	ID	1 5E+6	NLV	NLV	NLV	NLV	ID	2 1E+6	NA
2-Nitrophenol	88755	NA	400	ID	1 4E+6	NLV	NLV	NLV	NLV	ID	1 2E+6	NA

SOIL: RESIDENTIAL AND COMMERCIAL I

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection			Indoor Air	Ambient Air (Y)				Direct Contact	
		#10	#11	#12	#13	#14	#15	#16	#17	#18	#19	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Direct Contact Criteria	Soil Saturation Concentration Screening Levels
Pentachlorophenol	87865	NA	3 200	(G X)	2 7E+5	NLV	NLV	NLV	NLV	1 0E+8	8 100	NA
Phenol	108952	NA	88 000	4 200	1 2E+7 (C)	NLV	NLV	NLV	NLV	4 0E+10	1 2E+7 (C)	1 2E+7
2 4 5-Trichlorophenol	95954	NA	1 6E+5	NA	2 9E+7	NLV	NLV	NLV	NLV	2 3E+10	4 2E+7	NA
2 4 6-Trichlorophenol	88062	NA	11 000	700	7 8E+5	NLV	NLV	NLV	NLV	1 0E+9	9 0E+5	NA
3 Trifluoromethyl-4-nitrophenol	88302	NA	1 1E+5	NA	1 1E+8	NLV	NLV	NLV	NLV	ID	2 6E+8	NA
MISCELLANEOUS												
Ammonia	7664417	NA	ID (N)	(AC)	ID	ID	ID	ID	ID	6 7E+9	ID	1 0E+7
Asbestos (AB)	1332214	NA	ID	NA	ID	NLV	NLV	NLV	NLV	1 0E+7 (M)	1 0E+7	NA
Chloride (B)	16887006	NA	5 0E+6	NA	ID	NLV	NLV	NLV	NLV	ID	5 0E+5 (F)	NA
Cyanide (B R)	57125	NA	4 000	400	2 5E+5 (P)	NLV	NLV	NLV	NLV	2 5E+5 (P)	2 5E+5 (P)	NA
Fluorine (soluble fluoride) (B)	7782414	NA	40,000	NA	2 6E+8	NLV	NLV	NLV	NLV	ID	2 5E+7	NA
Nitrate (B N)	14797558	NA	2 0E+5 (N)	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	ID	NA
Nitrite (B N)	14797650	NA	20 000 (N)	NA	4 2E+8	NLV	NLV	NLV	NLV	ID	ID	NA
Phosphorus (total) (B)	7723140	NA	1 3E+6	NA	ID	NLV	NLV	NLV	NLV	ID	1 0E+9 (D)	NA
Sulfate	14808798	NA	5 0E+6	NA	ID	NLV	NLV	NLV	NLV	ID	ID	NA
Urea	57136	NA	ID (N)	NA	ID	NLV	NLV	NLV	NLV	ID	ID	NA
PBBs												
Polybrominated biphenyls (J)	37324[illegible]15	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	1,100	NA
GLYCOLS												
Diethylene glycol monobutyl ether	112345	NA	1 400	NA	8 6E+7	NLV	NLV	NLV	NLV	1 3E+9	5 1E+6	1 1E+8
Ethylene glycol	107211	NA	3 0E+5	NA	1 1E+8 (C)	NLV	NLV	NLV	NLV	8 3E+10	1 1E+8 (C)	1 1E+8
Ethylene glycol monobutyl ether	111762	NA	3 900	NA	4 1E+7 (C)	14 000	3 3E+5	2 7E+6	6 6E+6	1 6E+10	3 0E+6	4 1E+7
Propylene glycol	57556	NA	3 0E+6	NA	1 0E+7 (C)	NLV	NLV	NLV	NLV	4 0E+11	1 0E+7 (C)	1 0E+7
CARBONYLS												
Acetaldehyde (I)	75070	NA	19 000	NA	1 1E+8 (C)	2 2E+5	1 7E+5	1 7E+5	2 8E+5	6 0E+8	1 4E+7	1 1E+8
Cyclohexanone (I)	108941	NA	5 2E+6	NA	2 2E+8 (C)	17 000	ID	ID	ID	6 7E+10	2 2E+8 (C)	2 2E+8
Formaldehyde	50000	NA	26 000	2 400	6 0E+7 (C)	12 000	13 000	23 000	52 000	2 4E+8	2 0E+7	6 0E+7
LOW MOLECULAR WEIGHT ACIDS												
Acetic acid (I)	64197	NA	9 0E+5 (M)	9 0E+5 (M)	6 5E+8 (C)	NLV	NLV	NLV	NLV	1 7E+10	6 3E+7	6 5E+8
Formic acid (I U)	64186	NA	9 0E+5 (M)	ID	1 1E+8 (C)	1 5E+6	9 0E+5 (M)	9 0E+5 (M)	9 0E+5 (M)	1 3E+8	1 1E+8 (C)	1 1E+8

SOIL: INDUSTRIAL AND COMMERCIAL II, III, AND IV

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

Developed under the authority of the

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451, AS AMENDED

Industrial and Commercial II, III and IV soil criteria were calculated using currently available toxicological and chemical-specific data These criteria may change as new data become available They are not necessarily final cleanup standards Current criteria are available on the ERD Homepage at www deq state mi us/erd Scientific notation is represented by E+ or E- a value, for example 2 x 10^6 is reported as 2 0E+6 Please refer to Operational Memorandum #6 for analytical methods and method detection limits All values are expressed in units of parts per billion (ug/kg) Changes made since the last revision of the tables (January 1999) are shaded

			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact			
		#10	#21		#12	#13	#22	#23	#24	#25	#26	#27	#28	#29	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection *Criteria*	Industrial And Commercial Drinking Water *Protection* Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation *Criteria*	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Industrial and Commercial II	Commercial III	Commercial IV	Soil Saturation Concentration Screening *Levels*
BTEX + MTBE															
Benzene (I)	71432	NA	100	100	4 000 (X)	1 9E+5	8 400	45 000	99 000	2 3E+5	4 7E+8	4 0E+5 (C)	4 0E+5 (C)	4 0E+5 (C)	4 0E+5
Ethylbenzene (I)	100414	NA	1 500	1,500	360	1 4E+5 (C)	1 4E+5 (C)	1 1E+7	1 4E+7	3 0E+7	2 9E+10	1 4E+5 (C)	1 4E+5 (C)	1 4E+5 (C)	1 4E+5
Methyl-tert-butyl ether (MTBE)	1634044	NA	800	800	15 000 (X)	6 0E+6 (C)	6 0E+6 (C)	3 1E+7	4 1E+7	8 9E+7	8 8E+10	6 0E+6 (C)	6 0E+6 (C)	6 0E+6 (C)	6 0E+6
Toluene (I)	108883	NA	16 000	16 000	2 800	2 5E+5 (C)	2 5E+5 (C)	3 3E+6	3 6E+7	3 6E+7	1 2E+10	2 5E+5 (C)	2 5E+5 (C)	2 5E+5 (C)	2 5E+5
Xylenes (I)	1330207	NA	5 600	5 600	700	1 5E+5 (C)	1 5E+5 (C)	5 4E+7	6 5E+7	1 3E+8	1 3E+11	1 5E+5 (C)	1 5E+5 (C)	1 5E+5 (C)	1 5E+5
VOLATILES															
Acetone (I)	67641	NA	15 000	42 000	34 000	1 1E+8 (C)	1 1E+8 (C)	1 6E+8	1 6E+8	2 0E+8	1 7E+11	7 4E+7	1 0E+8	1 1E+8 (C)	1 1E+8
Acrolein (I)	107028	NA	2 400	6 600	NA	2 3E+7 (C)	760	370	370	630	5 9E+5	1 2E+7	1 7E+7	2 3E+7 (C)	2 3E+7
Acrylonitrile (I)	107131	NA	32	130	98 (X)	1 6E+5	35 000	17 000	17 000	31 000	5 8E+7	46 000	64 000	1 3E+5	8 3E+6
Benzyl chloride	100447	NA	100	400	NA	40 000	33 000	48 000	48 000	52 000	7 8E+7	1 5E+5	2 0E+5	2 3E+5 (C)	2 3E+5
Bromobenzene (I)	108861	NA	530	1 500	NA	3 0E+5	5 8E+5	5 4E+5	5 4E+5	5 4E+5	2 1E+8	7 5E+5 (C)	7 6E+5 (C)	7 6E+5 (C)	7 6E+5
Bromodichloromethane	75274	NA	2 000 (W)	2 000 (W)	ID	2 2E+5	6 400	31 000	31 000	57 000	1 1E+8	4 0E+5	5 6E+5	1 1E+6	1 5E+6
Bromoform	75252	NA	2 000 (W)	2,000 (W)	NA	8 7E+5 (C)	7 7E+5	3 1E+6	3 1E+6	3 1E+6	3 6E+9	8 7E+5 (C)	8 7E+5 (C)	8 7E+5 (C)	8 7E+5
Bromomethane	74839	NA	200	580	700	1 3E+6	1 600	13 000	57 000	1 4E+5	1 5E+8	1 0E+6	1 5E+6	2 2E+6 (C)	2 2E+6
n-Butanol (I)	71363	NA	19 000	54,000	NA	8 7E+6 (C)	NLV	NLV	NLV	NLV	1 0E+10	8 7E+6 (C)	8 7E+6 (C)	8 7E+6 (C)	8 7E+6
2-Butanone (MEK) (I)	78933	NA	2 6E+5	7 6E+5	44 000	2 7E+7 (C)	2 7E+7 (C)	3 5E+7	3 5E+7	3 6E+7	2 9E+10	2 7E+7 (C)	2 7E+7 (C)	2 7E+7 (C)	2 7E+7
n-Butyl acetate (I)	123864	NA	11 000	32 000	NA	1 1E+6 (C)	1 1E+6 (C)	ID	ID	ID	2 8E+10	1 1E+6 (C)	1 1E+6 (C)	1 1E+6 (C)	1 1E+6
t Butyl alcohol (I)	75650	NA	78,000	2 2E+5	NA	1 1E+8 (C)	1 1E+8 (C)	ID	ID	ID	8 8E+10	1 1E+8 (C)	1 1E+8 (C)	1 1E+8 (C)	1 1E+8
n-Butylbenzene	104518	NA	1 600	4,600	NA	ID	ID	ID	ID	ID	ID	8 2E+6	1 0E+7 (C)	1 0E+7 (C)	1 0E+7
sec-Butylbenzene	135988	NA	1 600	4,600	NA	ID	ID	ID	ID	ID	ID	8 2E+6	1 0E+7 (C)	1 0E+7 (C)	1 0E+7
tert Butylbenzene (I)	98066	NA	1,600	4 600	NA	ID	ID	ID	ID	ID	ID	8 2E+6	1 0E+7 (C)	1 0E+7 (C)	1 0E+7
Carbon disulfide (I R)	75150	NA	16,000	46 000	ID	2 9E+5 (C)	1 4E+5	1 6E+6	8 0E+6	1 9E+7	2 1E+10	2 8E+5 (C)	2 8E+5 (C)	2 8E+5 (C)	2 8E+5
Carbon tetrachloride	56235	NA	100	100	900 (X)	32 000	990	12 000	34 000	79 000	1 7E+8	1 9E+5	2 7E+5	3 9E+5 (C)	3 9E+5

SOIL: INDUSTRIAL AND COMMERCIAL II, III, AND IV

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact			
		#10	#21		#12	#13	#22	#23	#24	#25	#26	#27	#28	#29	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Industrial And Commercial Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Industrial and Commercial II	Commercial III	Commercial IV	Soil Saturation Concentration Screening Levels
Chlorobenzene (I)	108907	NA	2 000	2 000	940	2 6E+5 (C)	2 2E+5	9 2E+5	1 1E+6	2 1E+6	2 1E+9	2 6E+5 (C)	2 6E+5 (C)	2 6E+5 (C)	2 6E+5
Chloroethane (I)	75003	NA	4 400	18 000	ID	9 7E+5 (C)	9 7E+5 (C)	3 6E+7	1 2E+8	2 8E+8	2 9E+11	9 7E+5 (C)	9 7E+5 (C)	9 7E+5 (C)	9 7E+5
2 Chloroethyl vinyl ether	110758	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	ID	ID	1 9E+6
Chloroform	67663	NA	2 000 (W)	2 000 (W)	3 400 (X)	1 5E+6 (C)	38 000	1 5E+5	3 4E+5	7 9E+5	1 6E+9	1 5E+6 (C)	1 5E+6 (C)	1 5E+6 (C)	1 5E+6
Chloromethane (I)	74873	NA	1 300	5 400	ID	1 1E+6 (C)	12 000	1 4E+5	1 2E+6	2 9E+6	6 1E+9	1 1E+6 (C)	1 1E+6 (C)	1 1E+6 (C)	1 1E+6
o-Chlorotoluene (I)	95498	NA	3 300	9 300	NA	5 0E+5 (C)	5 0E+5 (C)	ID	ID	ID	7 5E+10	5 0E+5 (C)	5 0E+5 (C)	5 0E+5 (C)	5 0E+5
Dibromochloromethane	124481	NA	2 000 (W)	2 000 (W)	ID	1 9E+5	21 000	80 000	80 000	98 000	1 6E+8	3 0E+5	4 1E+5	6 1E+5 (C)	6 1E+5
Dibromochloropropane	96128	NA	4 0	4 0	NA	1,200 (C)	1 200 (C)	1 200 (C)	1 200 (C)	1,200 (C)	1 200 (C)	1,200 (C)	1 200 (C)	1 200 (C)	1,200
Dibromomethane	74953	NA	1 600	4 600	NA	1 9E+6	ID	ID	ID	ID	ID	2 0E+6 (C)	2 0E+6 (C)	2 0E+6 (C)	2 0E+6
Dichlorodifluoromethane	75718	NA	93 000	2 7E+5	ID	1 0E+6 (C)	1 0E+6 (C)	6 3E+7	5 5E+8	1 4E+9	1 5E+12	1 0E+6 (C)	1 0E+6 (C)	1 0E+6 (C)	1 0E+6
1 1-Dichloroethane (I)	75343	NA	18 000	50 000	IP	7 9E+5 (C)	7 9E+5 (C)	3 6E+7	9 7E+7	2 3E+8	2 4E+11	7 9E+5 (C)	7 9E+5 (C)	7 9E+5 (C)	7 9E+5
1 2-Dichloroethane (I)	107062	NA	100	100	7 200 (X)	2E+5	11 000	21 000	33 000	74 000	1 5E+8	2 7E+5	3 8E+5	7 6E+5	1 2E+6
1 1 Dichloroethylene (I)	75354	NA	140	140	1 300 (X)	1 8E+5	330	3 700	15 000	37 000	7 8E+7	5 8E+5 (C)	5 8E+5 (C)	5 8E+5 (C)	5 8E+5
cis 1 2-Dichloroethylene (I)	156592	NA	1 400	1 400	ID	6 4E+5 (C)	6 4E+5 (C)	4 7E+7	9 8E+7	2 3E+8	2 3E+11	6 4E+5 (C)	6 4E+5 (C)	6 4E+5 (C)	6 4E+5
trans 1 2 Dichloroethylene	156605	NA	2 000	2 000	ID	1 4E+6 (C)	1 4E+6 (C)	3 7E+7	9 6E+7	2 2E+8	2 3E+11	1 4E+6 (C)	1 4E+6 (C)	1 4E+6 (C)	1 4E+6
1 2-Dichloropropane (I)	78875	NA	100	100	5 800 (X)	1 5E+5	7 400	30 000	51 000	1 2E+5	1 2E+8	3 6E+5	5 1E+5	5 5E+5 (C)	5 5E+5
1 3-Dichloropropene (I J)	542756	NA	94	380	NA	2 000	420	4 600	15 000	36 000	7 5E+7	1 4E+5	1 9E+5	3 8E+5	6 2E+5
Diethyl ether (I)	60297	NA	100 (M)	100 (M)	ID	7 4E+6 (C)	7 4E+6 (C)	1 0E+8	1 6E+8	3 5E+8	3 5E+11	7 4E+6 (C)	7 4E+6 (C)	7 4E+6 (C)	7 4E+6
Dimethylformamide (I)	68122	NA	14 000	40 000	NA	1 1E+8 (C)	NLV	NLV	NLV	NLV	8 8E+8	7 1E+7	1 0E+8	1 1E+8 (C)	1 1E+8
Dimethylsulfoxide	67685	NA	4 4E+6	1 3E+7	3 8E+6	1 8E+7 (C)	NLV	NLV	NLV	NLV	ID	1 8E+7 (C)	1 8E+7 (C)	1 8E+7 (C)	1 8E+7
1 4-Dioxane (I)	123911	NA	1 500	6 400	56 000 (X)	3 4E+7	NLV	NLV	NLV	NLV	7 1E+8	2 3E+6	3 2E+6	6 3E+6	9 7E+7
Epichlorohydrin (I)	106898	NA	1 700	7 000	NA	2 5E+6 (C)	1 2E+5	37 000	37 000	37,000	2 9E+7	2 3E+6	3 5E+6	7 3E+6	7 3E+6
Ethanol (I)	64175	NA	3 8E+7	7 6E+7	IP	1 1E+8 (C)	NLV	NLV	NLV	NLV	5 6E+11	1 1E+8 (C)	1 1E+8 (C)	1 1E+8 (C)	1 1E+8
Ethyl acetate (I)	141786	NA	1 3E+5	3 8E+5	NA	7 5E+6 (C)	7 5E+6 (C)	5 9E+7	5 9E+7	1 0E+8	9 4E+10	7 5E+6 (C)	7 5E+6 (C)	7 5E+6 (C)	7 5E+6
Ethylene dibromide	106934	NA	10 (M)	10 (M)	NA	320	3,600	5,800	5 800	9 800	1 8E+7	290	410	810	8 9E+5
n Heptane (I)	142825	NA	2 4E+5 (C)	2 4E+5 (C)	NA	2 4E+5 (C)	2 4E+5 (C)	ID	ID	ID	1 0E+11	2 4E+5 (C)	2 4E+5 (C)	2 4E+5 (C)	2 4E+5
n-Hexane (I)	110543	NA	44 000 (C)	44 000 (C)	NA	44 000 (C)	44 000 (C)	ID	ID	ID	5 9E+9	44,000 (C)	44 000 (C)	44 000 (C)	44 000
2 Hexanone (I)	591786	NA	20 000	58,000	NA	2 5E+6 (C)	1 8E+6	ID	ID	ID	1 2E+9	2 5E+6 (C)	2 5E+6 (C)	2 5E+6 (C)	2 5E+6
Isobutyl alcohol (I)	78831	NA	46 000	1 3E+5	NA	8 9E+6 (C)	8 9E+6 (C)	9 5E+7	9 5E+7	9 5E+7	4 4E+10	8 9E+6 (C)	8 9E+6 (C)	8 9E+6 (C)	8 9E+5
Isopropyl alcohol (I)	67630	NA	9 400	26 000	NA	1 1E+8 (C)	NLV	NLV	NLV	NLV	5 5E+9	4 8E+7	6 7E+7	1 1E+8 (C)	1 1E+8

SOIL: INDUSTRIAL AND COMMERCIAL II, III, AND IV

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact			
		#10	#21		#12	#13	#22	#23	#24	#25	#26	#27	#28	#29	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Industrial And Commercial Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Industrial and Commercial II	Commercial III	Commercial IV	Soil Saturation Concentration Screening Levels
Isopropyl benzene (I)	98828	NA	90 000	2 6E+5	ID	3 9E+5 (C)	3 9E+5 (C)	2 0E+6	ID	ID	2 6E+9	3 9E+5 (C)	3 9E+5 (C)	3 9E+5 (C)	3 9E+5
Methane	74828	NA	ID	ID	ID	ID	(K)	ID	ID	ID	ID	ID	ID	ID	ID
Methanol (I)	67561	NA	74 000	2 0E+5	ID	3 1E+6 (C)	1 2E+6	3 7E+7	4 6E+7	9 7E+7	9 6E+10	3 1E+6 (C)	3 1E+6 (C)	3 1E+6 (C)	3 1E+6
4 Methyl-2-pentanone (MIBK) (I)	108101	NA	36 000	1 0E+5	ID	2 7E+6 (C)	2 7E+6 (C)	5 3E+7	5 3E+7	7 0E+7	6 0E+10	2 7E+6 (C)	2 7E+6 (C)	2 7E+6 (C)	2 7E+6
Methylene chloride	75092	NA	100	100	19 000 (X)	2 2E+6	2 4E+5	7 0E+5	1 7E+6	4 0E+6	8 3E+9	2 3E+6 (C)	2 3E+6 (C)	2 3E+6 (C)	2 3E+6
Pentane (I)	109660	NA	ID	ID	NA	ID	2 4E+5 (C)	ID	ID	ID	5 2E+11	ID	ID	ID	2 4E+5
2-Pentene (I)	109682	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	ID	ID	2 2E+5
Propyl alcohol (I)	71238	NA	28 000	80 000	NA	1 1E+8 (C)	NLV	NLV	NLV	NLV	2 1E+10	1 1E+8 (C)	1 1E+8 (C)	1 1E+8 (C)	1 1E+8
n-Propylbenzene (I)	103651	NA	1 600	4 600	NA	ID	ID	ID	ID	ID	5 9E+8	8 2E+6	1 0E+7 (C)	1 0E+7 (C)	1 0E+7
Styrene (I)	100425	NA	2,700	2 700	2 200	85 000	5 2E+5 (C)	3 2E+6	3 2E+6	4 0E+6	6 6E+9	5 2E+5 (C)	5 2E+5 (C)	5 2E+5 (C)	5 2E+5
1 1 1 2-Tetrachloroethane	630206	NA	660	26 000	NA	2 2E+5	65 000	1 9E+5	2 1E+5	3 3E+5	5 3E+8	9 5E+5	9 8E+5 (C)	9 8E+5 (C)	9 8E+5
1 1 2 2-Tetrachloroethane	79345	NA	86	340	1 600 (X)	42 000	23 000	34 000	34 000	34 000	6 8E+7	1 2E+5	1 7E+5	3 5E+5	8 7E+5
Tetrachloroethylene	127184	NA	100	100	900 (X)	88 000 (C)	60 000	6 0E+5	1 4E+6	3 3E+6	6 8E+9	88 000 (C)	88 000 (C)	88 000 (C)	88 000
Tetrahydrofuran (I)	109999	NA	4 800	14 000	2 2E+5 (X)	7 8E+7	2 4E+6	ID	ID	ID	1 7E+11	2 5E+7	3 4E+7	6 8E+7	1 2E+8
1,1 1-Trichloroethane	71556	NA	4 000	4 000	4,000	4 6E+5 (C)	4 6E+5 (C)	4 5E+6	1 5E+7	3 1E+7	2 9E+10	4 6E+5 (C)	4 6E+5 (C)	4 6E+5 (C)	4 6E+5
1 1 2-Trichloroethane	79005	NA	100	100	6 600 (X)	1 9E+5	24 000	57 000	57 000	1 2E+5	2 5E+8	4 4E+5	6 1E+5	9 2E+5 (C)	9 2E+5
Trichloroethylene	79016	NA	100	100	4 000 (X)	2 2E+5	37,000	2 6E+5	4 4E+5	1 1E+6	2 3E+9	5 0E+5 (C)	5 0E+5 (C)	5 0E+5 (C)	5 0E+5
Trichlorofluoromethane	75694	NA	52 000	1 5E+5	NA	5 6E+5 (C)	5 6E+5 (C)	1 1E+8	1 4E+11	1 4E+11	1 7E+12	5 6E+5 (C)	5 6E+5 (C)	5 6E+5 (C)	5 6E+5
1 2 3-Trichloropropane	96184	NA	840	2 400	NA	8 3E+5 (C)	ID	ID	ID	ID	ID	8 3E+5 (C)	8 3E+5 (C)	8 3E+5 (C)	8 3E+5
1 1 2 Trichloro-1 2 2-trifluoroethane	76131	NA	5 6E+5 (C)	5 6E+5 (C)	NA	5 6E+5 (C)	5 6E+5 (C)	2 1E+8	8 9E+8	2 1E+9	2 3E+12	5 6E+5 (C)	5 6E+5 (C)	5 6E+5 (C)	5 6E+5
Triethanolamine	102716	NA	74,000	2 0E-5	NA	1 1E+8 (C)	NLV	NLV	NLV	NLV	1 5E+9	1 1E+8 (C)	1 1E+8 (C)	1 1E+8 (C)	1 1E+8
2 2 4-Trimethyl pentane	540841	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	ID	ID	19 000
2 2 4-Trimethyl-2-pentene (I)	107404	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	ID	ID	56 000
1 2 4-Trimethylbenzene (I)	95636	NA	2,100	2,100	ID	1 1E+5 (C)	1 1E+5 (C)	2 5E+7	6 0E+8	6 0E+8	3 6E+10	1 1E+5 (C)	1 1E+5 (C)	1 1E+5 (C)	1 1E+5
1 3 5-Trimethylbenzene (I)	108678	NA	1,800	1,800	ID	94,000 (C)	94 000 (C)	1 9E+7	4 6E+8	4 6E+8	3 6E+10	94 000 (C)	94 000 (C)	94 000 (C)	94 000
Vinyl acetate (I)	108054	NA	13 000	36 000	NA	2 4E+6 (C)	1 5E+6	2 0E+6	2 7E+6	5 9E+6	5 9E+9	2 4E+6 (C)	2 4E+6 (C)	2 4E+6 (C)	2 4E+6
Vinyl chloride	75014	NA	40	40	300	5 800	150	1 500	9 000	22 000	4 7E+7	11 000	16 000	31 000	4 9E+5
INORGANICS															
Aluminum (B)	7429905	6 9E+6	1,000	1 000	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	3 0E+8	3 0E+8	3 0E+8	NA
Antimony (B)	7440360	NA	4 300	4 300	ID	5 4E+7	NLV	NLV	NLV	NLV	1 5E+8	1 6E+6	2 2E+6	5 2E+6	NA

SOIL: INDUSTRIAL AND COMMERCIAL II, III, AND IV

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact			
		#10	#21		#12	#13	#22	#23	#24	#25	#26	#27	#28	#29	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Industrial And Commercial Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Industrial and Commercial II	Commercial III	Commercial IV	Soil Saturation Concentration Screening Levels
Arsenic (B)	7440382	5 800	23 000	23 000	70 000 (X)	2 2E+6	NLV	NLV	NLV	NLV	9 1E+5	1 0E+5	1 4E+5	3 3E+5	NA
Barium (B)	7440393	75 000	1 3E+6	1 3E+6	1 3E+5	1 0E+9 (D)	NLV	NLV	NLV	NLV	1 5E+8	3 2E+8	4 4E+8	1 0E+9 (D)	NA
Beryllium (B)	7440417	NA	51 000	51 000	(G)	1 0E+9 (D)	NLV	NLV	NLV	NLV	1 6E+6	2 3E+7	3 2E+7	7 4E+7	NA
Boron (B)	7440428	NA	10 000	10 000	38,000	2 6E+8	NLV	NLV	NLV	NLV	ID	2 7E+8	2 7E+8	2 1E+8	NA
Cadmium (B)	7440439	1 200	6 000	6 000	(G X)	2 5E+8	NLV	NLV	NLV	NLV	2 2E+6	4 5E+6	6 3E+6	1 5E+7	NA
Chromium (III) (B H)	16065831	18 000 (total)	1 0E+9 (D)	1 0E+9 (D)	(G X)	1 0E+9 (D)	NLV	NLV	NLV	NLV	1 5E+8	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA
Chromium (VI) (B H)	18540299	18 000 (total)	30 000	30 000	3 300	3 0E+8	NLV	NLV	NLV	NLV	3 3E+5	2 2E+7	3 0E+7	7 1E+7	NA
Cobalt (B)	7440484	6 800	1 000	2 000	2 000	2 2E+7	NLV	NLV	NLV	NLV	5 9E+6	2 3E+7	3 2E+7	7 4E+7	NA
Copper (B)	7440508	32 000	1 6E+8	1 6E+8	(G)	1 0E+9 (D)	NLV	NLV	NLV	NLV	5 9E+7	1 7E+8	2 4E+8	5 6E+8	NA
Iron (B)	7439896	1 2E+7	6 000	6 000	NA	ID	NLV	NLV	NLV	NLV	ID	ID	ID	ID	NA
Lead (B)	7439921	21 000	1 000 (M)	1 000 (M)	(G M X)	ID	NLV	NLV	NLV	NLV	4 4E+7	9 0E+5 (draft)	4 0E+5	4 0E+5	NA
Lithium (B)	7439932	9 800	3 400	7 000	500	1 2E+8	NLV	NLV	NLV	NLV	ID	2 6E+7	2 6E+7	2 6E+7	NA
Magnesium (B)	7439954	NA	8 4E+6	2 4E+7	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	2 9E+9	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA
Manganese (B)	7439965	4 4E+5	2 000 (M)	2 000 (M)	(G X)	2 0E+8	NLV	NLV	NLV	NLV	1 5E+6	2 1E+8	3 0E+8	7 0E+8	NA
Mercury (Inorganic) (B)	7439976	130	1 700	1 700	170	47 000	NLV	NLV	NLV	NLV	ID	1 4E+6	1 9E+6	4 5E+6	NA
Molybdenum (B)	7439987	NA	740	2 000	16 000 (X)	2 2E+7	NLV	NLV	NLV	NLV	ID	2 3E+7	3 2E+7	7 4E+7	NA
Nickel (B)	7440020	20 000	1 0E+5	1 0E+5	(G)	1 0E+9 (D)	NLV	NLV	NLV	NLV	1 6E+7	3 4E+8	4 8E+8	1 0E+9 (D)	NA
Selenium (B)	7782492	410	4,000	4 000	[illegible]	8 8E+7	NLV	NLV	NLV	NLV	5 9E+7	2 3E+7	3 2E+7	7 4E+7	NA
Silver (B)	7440224	1 000	4 500	13,000	500 (M)	2 3E+8	NLV	NLV	NLV	NLV	2 9E+6	2 1E+7	3 0E+7	7 0E+7	NA
Sodium (B)	7440235	NA	3 2E+6	9 0E+6	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA
Strontium (B)	7440246	NA	92 000	2 6E+5	15 000	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA
Thallium (B)	7440280	NA	2 300	2,300	4 200 (X)	1 6E+7	NLV	NLV	NLV	NLV	ID	3 0E+5	4 2E+5	1 0E+6	NA
Vanadium (B)	7440622	NA	1 0E+6	2 9E+6	240	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	3 9E+7	5 5E+7	1 3E+8	NA
White phosphorus (B,R)	12185103	NA	100 (M)	100 (M)	NA	64,000	NLV	NLV	NLV	NLV	ID	68 000	95 000	2 2E+5	NA
Zinc (B)	7440666	47 000	2 4E+6	5 0E+6	(G)	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA
PAHs															
Acenaphthene	83329	NA	3 0E+5	8 7E+5	4 300	9 6E+5	3 5E+8	9 7E+7	9 7E+7	9 7E+7	6 2E+9	8 1E+8	1 0E+9 (D)	1 0E+9 (D)	NA
Acenaphthylene	208968	NA	2 900	8 500	ID	4 4E+5	3 0E+6	2 7E+6	2 7E+6	2 7E+6	1 0E+9	1 6E+7	2 3E+7	5 4E+7	NA
Anthracene	120127	NA	41 000	41 000	ID	41 000	1 0E+9 (D)	1 6E+9	1 6E+9	1 6E+9	2 9E+10	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA
Benzo(a)anthracene (O)	56553	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	2 1E+5	2 9E+5	6 8E+5	NA

SOIL: INDUSTRIAL AND COMMERCIAL II, III, AND IV

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact			
		#10	#21		#12	#13	#22	#23	#24	#25	#26	#27	#28	#29	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Industrial And Commercial Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Industrial and Commercial II	Commercial III	Commercial IV	Soil Saturation Concentration Screening Levels
Benzo(b)fluoranthene (Q)	205992	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	2 1E+5	2 9E+5	6 8E+5	NA
Benzo(k)fluoranthene (Q)	207089	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	2 1E+6	2 9E+6	6 8E+6	NA
Benzo(g h i)perylene	191242	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	3 5E+8	1 6E+7	2 3E+7	5 4E+7	NA
Benzo(a)pyrene (Q)	50328	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1 9E+6	21 000	29 000	68 000	NA
beta-Chloronaphthalene	91587	NA	6 5E+5	1 8E+6	NA	2 3E+6	ID	ID	ID	ID	ID	1 9E+8	2 6E+8	5 2E+8	NA
Chrysene (Q)	218019	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	2 1E+7	2 9E+7	6 8E+7	NA
Dibenzo(a h)anthracene (Q)	53703	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	21 000	29 000	68 000	NA
Dibenzofuran	132649	NA	ID	ID	1,700	ID	ID	ID	ID	ID	ID	ID	ID	ID	NA
Fluoranthene	206440	NA	7 2E+5	7 2E+5	5,500	7 2E+5	1 0E+9 (D)	8 8E+8	8 8E+8	8 8E+8	4 1E+9	5 4E+8	7 6E+8	1 0E+9 (D)	NA
Fluorene	86737	NA	3 9E+5	8 9E+5	2 400	8 9E+5	1 0E+9 (D)	1 5E+8	1 5E+8	1 5E+8	4 1E+9	5 4E+8	7 6E+8	1 0E+9 (D)	NA
Indeno(1 2,3-cd)pyrene (Q)	193395	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	2 1E+5	2 9E+5	6 8E+5	NA
2-Methylnaphthalene	91576	NA	57,000	1 7E+5	ID	7 1E+6	ID	ID	ID	ID	ID	1 6E+8	2 3E+8	5 4E+8	NA
Naphthalene	91203	NA	17 000	50 000	850	2 0E+6	7 7E+7	5 9E+7	5 9E+7	5 9E+7	1 5E+10	1 6E+8	2 3E+8	5 4E+8	NA
Phenanthrene	85018	NA	12 000	34,000	2,300	4 5E+5	2 8E+7	1 5E+5	7 2E+5	7 2E+5	5 9E+7	1 6E+7	2 3E+7	5 4E+7	NA
Pyrene	129000	NA	4 7E+5	4 7E+5	ID	4 7E+5	1 0E+9 (D)	7 7E+8	7 7E+8	7 7E+8	2 9E+9	3 4E+8	4 7E+8	1 0E+9 (D)	NA
SEMIVOLATILES															
Acetonitrile (I)	75058	NA	2 800	8 000	NA	2 2E+7 (C)	2 2E+7 (C)	1 1E+7	1 1E+7	1 2E+7	1 0E+10	1 4E+7	2 0E+7	2 2E+7 (C)	2 2E+7
Acrylamide	79061	NA	10	16	NA	1 4E+5	NLV	NLV	NLV	NLV	3 0E+6	33 000	47 000	1 1E+5	NA
Acrylic acid (I)	79107	NA	78 000	2 2E+5	NA	1 3E+8 (C)	6 1E+6	2 6E+5	2 7E+5	2 7E+5	2 9E+7	1 3E+8 (C)	1 3E+8 (C)	1 3E+8 (C)	1 3E+8
Aniline (I)	62533	NA	3 000	12 000	IP	4 5E+6 (C)	NLV	NLV	NLV	NLV	2 9E+7	4 5E+6 (C)	4 5E+6 (C)	4 5E+6 (C)	4 5E+6
Azobenzene	103333	NA	1,400	5,900	NA	76 000	5 9E+5	ID	ID	ID	1 3E+8	1 4E+6	1 9E+6	4 5E+6	NA
Benzidine	92875	NA	1 000 (M)	1,000 (M)	ID	1 000 (M)	NLV	NLV	NLV	NLV	59 000	1 000 (M)	1,000 (M)	2,100	NA
Benzoic acid	65850	NA	6 4E+5	1 8E+6	NA	7 0E+7	NLV	NLV	NLV	NLV	ID	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA
Benzyl alcohol	100516	NA	2 0E+5	5 8E+5	NA	5 8E+6 (C)	NLV	NLV	NLV	NLV	1 5E+11	5 8E+6 (C)	5 8E+6 (C)	5 8E+6 (C)	5 8E+6
bis(2-chloroethoxy)ethane	112265	NA	ID	ID	NA	ID	NLV	NLV	NLV	NLV	ID	ID	ID	ID	2 7E+6
bis(2-Chloroethyl)ether (I)	111444	NA	330 (M)	330 (M)	NA	42,000	44 000	13,000	13 000	13 000	1 2E+7	23,000	32 000	63 000	2 2E+6
Camphene (I)	79925	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	ID	ID	NA
Caprolactam	105602	NA	1 2E+5	3 4E+5	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	2 9E+8	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA
Carbazole	86748	NA	860	19 000	330 (M)	3 2E+5	NLV	NLV	NLV	NLV	ID	1 2E+6	1 7E+6	3 5E+6	NA
Decabromodiphenyl ether	1163195	NA	1 4E+5	1 4E+5	NA	1 4E+5	1 0E+9 (D)	ID	ID	ID	1 0E+9	4 5E+7	6 3E+7	1 5E+8	NA

SOIL: INDUSTRIAL AND COMMERCIAL II, III, AND IV

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact			
		#10	#21		#12	#13	#22	#23	#24	#25	#26	#27	#28	#29	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Industrial And Commercial Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Industrial and Commercial II	Commercial III	Commercial IV	Soil Saturation Concentration Screening Levels
Di(2-ethylhexyl) adipate	103231	NA	9 6E+5 (C)	9 6E+5 (C)	NA	9 6E+5 (C)	NLV	NLV	NLV	NLV	ID	9 6E+5 (C)	9 6E+5 (C)	9 6E+5 (C)	9 6E+5
Diacetone alcohol (I)	123422	NA	ID	ID	NA	ID	NLV	NLV	NLV	NLV	7 1E+10	ID	ID	ID	1 1E+8
1 2-Dichlorobenzene	95501	NA	13 000	13 000	340	2 1E+5 (C)	2 1E+5 (C)	4 6E+7	4 6E+7	5 5E+7	4 4E+10	2 1E+5 (C)	2 1E+5 (C)	2 1E+5 (C)	2 1E+5
1,3-Dichlorobenzene	541731	NA	17 000	18,000	1 100	2 0E+5 (C)	ID	ID	ID	ID	ID	2 0E+5 (C)	2 0E+5 (C)	2 0E+5 (C)	2 0E+5
1 4-Dichlorobenzene	106467	NA	1 600	1 700	280	60,000	1 0E+5	2 6E+5	2 6E+5	3 4E+5	5 7E+8	1 0E+6	1 4E+6	2 9E+6	NA
3 3'-Dichlorobenzidine	91941	NA	2 000 (M)	2 000 (M)	2 000 (M X)	6 900	NLV	NLV	NLV	NLV	8 2E+6	55,000	77 000	1 5E+5	NA
2 6-Dichloro-4-nitroaniline	99309	NA	44 000	1 3E+5	NA	1 4E+5	NLV	NLV	NLV	NLV	ID	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA
Diisopropylamine (I)	108189	NA	110	320	NA	3 8E+5	ID	ID	ID	ID	ID	5 7E+5	8 0E+5	1 6E+6	6 7E+6
Dimethyl phthalate	131113	NA	7 9E+5 (C)	7 9E+5 (C)	NA	7 9E+5 (C)	NLV	NLV	NLV	NLV	1 5E+9	7 9E+5 (C)	7 9E+5 (C)	7 9E+5 (C)	7 9E+5
N N-Dimethylacetamide	127195	NA	3 600	10 000	82 000 (X)	1 1E+8 (C)	NLV	NLV	NLV	NLV	ID	1 9E+7	2 6E+7	5 2E+7	1 1E+8
N N-Dimethylaniline	121697	NA	320	920	NA	3 7E+5	8 0E+5 (C)	ID	ID	ID	3 3E+8	8 0E+5 (C)	8 0E+5 (C)	8 0E+5 (C)	8 0E+5
2 4-Dinitrotoluene	121142	NA	15 000	15 000	NA	3 8E+6	NLV	NLV	NLV	NLV	2 0E+7	2 2E+5	3 1E+5	7 3E+5	NA
1-Formylpiperidine	2591868	NA	1 600	4 600	NA	ID	ID	ID	ID	ID	ID	8 2E+6	1 0E+7 (C)	1 0E+7 (C)	1 0E+7
Gentian violet	548629	NA	170	700	NA	9 8E+6	NLV	NLV	NLV	NLV	ID	1 5E+6	2 1E+6	5 0E+6	NA
Hexabromobenzene	87821	NA	5 400	5 400	ID	1 0E+7	ID	ID	ID	ID	ID	1 3E+7	1 8E+7	4 2E+7	NA
Hexachlorobenzene (C-56)	118741	NA	1 800	1 800	ID	3 500	2 2E+5	56 000	56 000	56 000	8 5E+6	94 000	1 3E+5	3 1E+5	NA
Hexachlorobutadiene (C-46)	87683	NA	19 000	77 000	ID	3 4E+5	3 5E+5 (C)	1 6E+6	1 3E+6	1 6E+6	1 8E+8	3 5E+5 (C)	3 5E+5 (C)	3 5E+5 (C)	3 5E+5
alpha Hexachlorocyclohexane	319846	NA	25	98	NA	2 300	6 8E+5	86 000	86 000	86 000	2 1E+6	24 000	33 000	79 000	NA
beta-Hexachlorocyclohexane	319857	NA	85	350	NA	10 000	NLV	NLV	NLV	NLV	7 4E+6	83 000	1 2E+5	2 8E+5	NA
Hexachlorocyclopentadiene (C-56)	77474	NA	36 000	36,000	ID	81 000 (C)	ID	ID	ID	ID	ID	81,000 (C)	81 000 (C)	81 000 (C)	81 000
Hexachloroethane	67721	NA	17,000	69,000	1,800 (X)	4 1E+5	3 7E+5	1 4E+6	1 4E+6	1 4E+6	1 0E+8	1 8E+6	2 5E+6	4 9E+6	NA
Isophorone	78591	NA	18,000	74 000	11,000 (X)	2 4E+6 (C)	NLV	NLV	NLV	NLV	8 2E+9	2 4E+6 (C)	2 4E+6 (C)	2 4E+6 (C)	2 4E+6
2-Methoxyethanol (I)	109864	NA	150	400	ID	1 8E+7	NLV	NLV	NLV	NLV	5 9E+8	7 4E+5	1 0E+6	2 1E+6	1 1E+8
N-Methyl-morpholine (I)	109024	NA	400	1 '00	NA	3 2E+7	NLV	NLV	NLV	NLV	ID	2 0E+6	2 8E+6	5 6E+6	1 1E+8
Methylcyclopentane (I)	96377	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	ID	ID	3 4E+5
4 4-Methylene-bis-2-chloroaniline (MBOCA)	101144	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1 1E+8	1 6E-5	2 2E+5	5 1E+5	NA
Nitrobenzene (I)	98953	NA	330 (M)	330 (M)	3,600 (X)	1 9E+5	4 9E+5 (C)	4 6E+6	4 6E+6	4 6E+6	1 5E+9	3 4E+5	4 8E+5	4 9E+5 (C)	4 9E+5
n-Nitroso-di-n-propylamine	621647	NA	330 (M)	330 (M)	NA	4 400	NLV	NLV	NLV	NLV	2 0E+6	3 500	5 000	9 900	1 5E+6
N Nitrosodiphenylamine	86306	NA	3 400	14 000	NA	6 0E+5	NLV	NLV	NLV	NLV	ID	5 1E+6	7 1E+6	1 4E+7	NA
Oxo-hexyl acetate	88230357	NA	1 500	4 200	NA	ID	ID	ID	ID	ID	2 4E+9	7 4E+6	1 0E+7 (C)	1 0E+7 (C)	1 0E+7

SOIL: INDUSTRIAL AND COMMERCIAL II, III, AND IV

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact			
		#10	#21		#12	#13	#22	#23	#24	#25	#26	#27	#28	#29	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Industrial And Commercial Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Industrial and Commercial II	Commercial III	Commercial IV	Soil Saturation Concentration Screening Levels
Pentachlorobenzene	608935	NA	29 000	81,000	NA	1 9E+5 (C)	ID	ID	ID	ID	ID	1 9E+5 (C)	1 9E+5 (C)	1 9E+5 (C)	1 9E+5
Pentachloronitrobenzene	82688	NA	37 000	37,000	NA	37 000	2 2E+5	2 8E+5	2 8E+5	2 8E+5	1 5E+8	3 4E+7	4 7E+7	1 1E+8	NA
Piperidine	110894	NA	64	180	NA	6 4E+5	NLV	NLV	NLV	NLV	4 1E+9	3 3E+5	4 6E+5	9 1E+5	1 2E+8
Propionic acid (I)	79094	NA	3 6E+5	7 0E+5	NA	1 1E+8 (C)	NLV	NLV	NLV	NLV	8 8E+9	1 1E+8 (C)	1 1E+8 (C)	1 1E+8 (C)	1 1E+8
Pyridine (I)	110861	NA	330 (M)	420	NA	37 000 (C)	2 000	9 800	40,000	97,000	1 0E+8	37,000 (C)	37 000 (C)	37 000 (C)	37 000
1 2 4 5 Tetrachlorobenzene	95943	NA	1 5E+6	1 5E+6	IP	1 5E+6	ID	ID	ID	ID	ID	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA
p-Toluidine	106490	NA	660 (M)	660 (M)	NA	1 3E+5	NLV	NLV	NLV	NLV	1 3E+8	7 9E+5	1 1E+6	1 2E+6 (C)	1 2E+6
Tributylamine	102829	NA	7,800	23,000	ID	5 3E+5	1 1E+6	ID	ID	ID	2 1E+8	1 0E+6	1 5E+6	2 9E+6	3 7E+6
1,2 4-Trichlorobenzene	120821	NA	4 200	4 200	1 800	8 9E+5	1 1E+6 (C)	3 4E+7	3 4E+7	3 4E+7	1 1E+10	1 1E+6 (C)	1 1E+6 (C)	1 1E+6 (C)	1 1E+6
Triphenyl phosphate	115866	NA	1 1E+5 (C)	1 1E+5 (C)	NA	1 1E+5 (C)	NLV	ID	ID	ID	ID	1 1E+5 (C)	1 1E+5 (C)	1 1E+5 (C)	1 1E+5
Iris(2 3-Dibromopropyl)phosphate	126727	NA	43	180	NA	27 000 (C)	27,000 (C)	60 000	60 000	60 000	7 4E+6	27 000 (C)	27 000 (C)	27,000 (C)	27 000
PCBs															
Polychlorinated biphenyls (PCBs) (J,T)	1336363	NA	NLL	NLL	NLL	NLL	1 6E+7	8 2E+5	2 8E+7	2 8E+7	6 5E+6	(T)	(T)	(T)	NA
PHTHALATES															
bis(2 Ethylhexyl)phthalate	117817	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	8 9E+8	1 0E+7 (C)	1 0E+7 (C)	1 0E+7 (C)	1 0E+7
Butyl benzyl phthalate	85687	NA	3 1E+5 (C)	3 1E+5 (C)	26 000 (X)	3 1E+5 (C)	NLV	NLV	NLV	NLV	2 1E+10	3 1E+5 (C)	3 1E+5 (C)	3 1E+5 (C)	3 1E+5
Di-n-butyl phthalate	84742	NA	7 6E+5 (C)	7 6E+5 (C)	11 000	7 6E+5 (C)	NLV	NLV	NLV	NLV	1 5E+9	7 6E+5 (C)	7 6E+5 (C)	7 6E+5 (C)	7 6E+5
Di-n-octyl phthalate	117840	NA	1 0E+8	1 4E+8 (C)	ID	1 4E+8 (C)	NLV	NLV	NLV	NLV	ID	8 1E+7	1 1E+8	1 4E+8 (C)	1 4E+8
Dicyclohexyl phthalate	84617	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	ID	ID	NA
Diethyl phthalate	84662	NA	1 1E+5	3 2E+5	NA	7 4E+5 (C)	NLV	NLV	NLV	NLV	1 5E+9	7 4E+5 (C)	7 4E+5 (C)	7 4E+5 (C)	7 4E+5
PESTICIDES															
Alachlor	15972608	NA	52	52	290 (X)	ID	NLV	NLV	NLV	NLV	ID	1 9E+6	2 6E+6	6 2E+6	NA
Aldrin	309002	NA	NLL	NLL	NLL	NLL	7 1E+6	2 0E+5	2 0E+5	2 0E+5	8 0E+5	8 800	12,000	29 000	NA
Atrazine	1912249	NA	60	60	150 (X)	32 000	NLV	NLV	NLV	NLV	ID	6 8E+5	9 5E+5	2 3E+6	NA
Chlordane (J)	57749	NA	NLL	NLL	NLL	NLL	5 9E+7	4 2E+6	4 2E+6	4 2E+6	2 1E+7	1 7E+5	2 4E+5	4 8E+5	NA
Chlorpyrifos	2921882	NA	17,000	48,000	NA	8 4E+5	ID	ID	ID	ID	5 9E+7	1 4E+7	1 9E+7	4 5E+7	NA
Cyanazine	21725462	NA	500 (M)	500 (M)	1 100 (X)	34 000	NLV	NLV	NLV	NLV	ID	2 6E+5	3 6E+5	8 5E+5	NA
Dacthal	1861321	NA	50 000	1 4E+5	NA	3 4E+5	NLV	NLV	NLV	NLV	ID	4 5E+7	6 3E+7	1 5E+8	NA
4-4'-DDD	72548	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	6 3E+5	8 8E+5	2 1E+6	NA
4-4' DDE	72559	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	4 4E+5	6 2E+5	1 5E+6	NA

SOIL: INDUSTRIAL AND COMMERCIAL II, III, AND IV

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact			
		#10	#21		#12	#13	#22	#23	#24	#25	#26	#27	#28	#29	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Industrial And Commercial Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Industrial and Commercial II	Commercial III	Commercial IV	Soil Saturation Concentration Screening Levels
4-4 -DDT	50293	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	4 0E+7	4 4E+5	6 2E+5	1 5E+6	NA
Diazinon	333415	NA	95	280	NA	80 000	NLV	NLV	NLV	NLV	ID	3 1E+5 (C)	3 1E+5 (C)	3 1E+5 (C)	3 1E+5
Dichlorovos	62737	NA	58	240	NA	2 7E+5	NLV	NLV	NLV	NLV	1 5E+7	5 2E+5	7 2E+5	1 7E+6	2 5E+6
Dieldrin	60571	NA	NLL	NLL	NLL	NLL	7 3E+5	64,000	64 000	64 000	8 5E+5	9 400	13 000	31 000	NA
Dinoseb	88857	NA	290	300	NA	1 4E+5 (C)	ID	ID	ID	ID	ID	1 4E+5 (C)	1 4E+5 (C)	1 4E+5 (C)	1 4E+5
Diuron	330541	NA	620	1 800	NA	7 5E+5	NLV	NLV	NLV	NLV	ID	1 9E+7	2 7E+7	6 4E+7	NA
Endosulfan (J)	115297	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	1 0E+6	1 5E+6	3 4E+6	NA
Endothall	145733	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1 0E+9	7 7E+7	1 1E+8	2 5E+8	NA
Endrin	72208	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	7 7E+5	1 1E+6	2 5E+6	NA
Heptachlor	76448	NA	NLL	NLL	NLL	NLL	1 9E+6	2 1E+5	2 1E+5	2 1E+5	3 0E+6	33 000	47 000	1 1E+5	NA
Heptachlor epoxide	1024573	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1 5E+6	16 000	23 000	54 000	NA
Lindane	58899	NA	20 (M)	20 (M)	20 (M)	3 700	ID	ID	ID	ID	ID	1 2E+5	1 6E+5	3 8E+5	NA
Methoxychlor	72435	NA	1 3E+5	1 3E+5	NA	1 1E+5	ID	ID	ID	ID	ID	2 3E+7	3 2E+7	7 4E+7	NA
Methyl parathion	298000	NA	44	130	NA	66 00	NLV	NLV	NLV	NLV	ID	1 1E+6	1 6E+6	3 7E+6	NA
Metolachlor	51218452	NA	3 200	13 000	NA	4 4E+5 (C)	NLV	NLV	NLV	NLV	ID	4 4E+5 (C)	4 4E+5 (C)	4 4E+5 (C)	4 4E+5
Pendimethalin	40487421	NA	1 1E+6	1 1E+6	NA	1 1E+6	NLV	NLV	NLV	NLV	ID	5 4E+8	7 6E+8	1 0E+9 (D)	NA
Prometon	1610180	NA	4 900	14 000	NA	4 1E+6	NLV	NLV	NLV	NLV	ID	9 9E+7	1 4E+8	3 3E+8	NA
Propachlor	1918167	NA	1 900	5 400	NA	8 9E+6	NLV	NLV	NLV	NLV	ID	5 9E+7	8 2E+7	1 9E+8	NA
Propazine	139402	NA	4 000	11 000	NA	1 7E+5	NLV	NLV	NLV	NLV	ID	1 2E+8	1 7E+8	4 0E+8	NA
Simazine	122349	NA	80	80	NA	96 000	NLV	NLV	NLV	NLV	ID	2 3E+7	3 3E+7	7 7E+7	NA
Tebuthiuron	34014181	NA	10 000	30 000	NA	5 0E+7	NLV	NLV	NLV	NLV	ID	3 2E+8	4 4E+8	1 0E+9 (D)	NA
Toxaphene	8001352	NA	2 600	2 600	860	11 000	NLV	NLV	NLV	NLV	1 2E+7	23 000	32,000	63 000	NA
Triallate	2303175	NA	95,000	2 5E+5 (C)	NA	2 5E+5 (C)	ID	ID	ID	ID	ID	2 5E+5 (C)	2 5E+5 (C)	2 5E+5 (C)	2 5E+5
PESTICIDES-HERBICIDES															
Aldicarb	116063	NA	60	60	NA	2 1E+6	NLV	NLV	NLV	NLV	ID	4 5E+6	6 3E+6	1 5E+7	NA
Aldicarb sulfoxide	1646873	NA	80	80	NA	6 1E+7	NLV	NLV	NLV	NLV	ID	5 9E+6	8 2E+6	1 9E+7	NA
Aldicarb sulfone	1646884	NA	50 (M)	70	NA	5 2E+7	NLV	NLV	NLV	NLV	ID	5 0E+6	7 0E+6	1 6E+7	NA
Carbaryl	63252	NA	14 000	40 000	NA	2 6E+6	ID	ID	ID	ID	ID	4 3E+8	6 1E+8	1 0E+9 (D)	NA
Carbofuran	1563662	NA	800	800	NA	6 6E+6	NLV	NLV	NLV	NLV	ID	3 7E+6	5 2E+6	1 0E+7	NA
Dalapon	75990	NA	4 000	4 000	NA	5 9E+7 (C)	NLV	NLV	NLV	NLV	ID	5 9E+7 (C)	5 9E+7 (C)	5 9E+7 (C)	5 9E+7

SOIL: INDUSTRIAL AND COMMERCIAL II, III, AND IV

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact			
		#10	#21		#12	#13	#22	#23	#24	#25	#26	#27	#28	#29	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Industrial And Commercial Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Industrial and Commercial II	Commercial III	Commercial IV	Soil Saturation Concentration Screening Levels
2,4-Dichlorophenoxyacetic acid	94757	NA	1 400	1 400	4 400	2 2E+6	NLV	NLV	NLV	NLV	2 9E+9	4 5E+7	6 3E+7	1 5E+8	NA
Diquat	85007	NA	400	400	NA	1 4E+7	NLV	NLV	NLV	NLV	ID	9 9E+6	1 4E+7	3 3E+7	NA
Glyphosate	1071836	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	4 5E+8	6 3E+8	1 0E+9 (D)	NA
2-Methyl-4-chlorophenoxyacetic acid	94746	NA	390	1,100	NA	4 3E+5	NLV	NLV	NLV	NLV	ID	4 5E+6	6 3E+6	1 5E+7	NA
Oxamyl	23135220	NA	4 000	4,000	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	1 7E+8	2 4E+8	5 6E+8	NA
Picloram	1918021	NA	10 000	10,000	NA	ID	NLV	NLV	NLV	NLV	ID	3 2E+8	4 4E+8	1 0E+9 (D)	NA
Silvex (2 4 5-TP)	93721	NA	3 700	3 700	NA	2 8E+6	NLV	NLV	NLV	NLV	ID	3 4E+7	4 7E+7	1 1E+8	NA
Trifluralin	1582098	NA	5 7E+5	2 3E+6	NA	7 8E+6	ID	ID	ID	ID	ID	2 0E+7	2 7E+7	6 4E+7	NA
DIOXINS															
2,3,7,8-Tetrabromodibenzo-p-dioxin (O)	50585416	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	(O)	(O)	(O)	NA
2 3,7,8-Tetrachlorodibenzo-p-dioxin (O)	1746016	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	89	0 99	1 4	2 9	NA
PHENOLS															
4-Chloro-3-methylphenol	59507	NA	5 600	16,000	NA	2 4E+6	NLV	NLV	NLV	NLV	ID	1 5E+7	2 1E+7	4 1E+7	NA
2-Chlorophenol	95578	NA	900	2,600	440	1 6E+6	ID	ID	ID	ID	ID	4 6E+6	6 5E+6	8 1E+6 (C)	8 1E+6
2,4-Dichlorophenol	120832	NA	2 600	7,700	680	1 5E+6	NLV	NLV	NLV	NLV	2 3E+9	1 0E+7 (C)	1 0E+7 (C)	1 0E+7 (C)	1 0E+7
2,4-Dimethylphenol	105679	NA	7 400	20,000	330 (M)	8 8E+6	NLV	NLV	NLV	NLV	2 1E+9	2 3E+8	3 2E+8	7 4E+8	NA
2 6-Dimethylphenol	576261	NA	330 (M)	330 (M)	NA	1 1E+5	NLV	NLV	NLV	NLV	ID	2 7E+6	3 8E+6	8 9E+6	NA
3 4-Dimethylphenol	95658	NA	330 (M)	580	NA	3 0E+5	NLV	NLV	NLV	NLV	ID	6 3E+6	8 8E+6	2 1E+7	NA
2-Methyl-4 6-dinitrophenol	534521	NA	1 700 (M)	1,700 (M)	NA	1 8E+5	NLV	NLV	NLV	NLV	ID	1 6E+6	2 2E+6	5 2E+6	NA
2-Methylphenol	95487	NA	7,400	20 000	1,600	1 4E+7	NLV	NLV	NLV	NLV	2 9E+9	3 7E+7	5 2E+7	1 0E+8	NA
3-Methylphenol	108394	NA	7 400	20,000	NA	4 5E+6 (C)	NLV	NLV	NLV	NLV	ID	4 5E+6 (C)	4 5E+6 (C)	4 5E+6 (C)	4 5E+6
4-Methylphenol	106445	NA	740	2 000	ID	1 5E+6	NLV	NLV	NLV	NLV	ID	2 3E+7	3 2E+7	7 4E+7	NA
2-Nitrophenol	88755	NA	400	1,200	ID	1 4E+6	NLV	NLV	NLV	NLV	ID	1 3E+7	1 8E+7	4 2E+7	NA
Pentachlorophenol	87865	NA	3,200	3 200	(G X)	2 7E+5	NLV	NLV	NLV	NLV	1 3E+8	63 000	89 000	1 7E+5	NA
Phenol	108952	NA	88 000	2 6E+5	4 200	1 2E+7 (C)	NLV	NLV	NLV	NLV	1 8E+10	1 2E+7 (C)	1 2E+7 (C)	1 2E+7 (C)	1 2E+7
2,4 5-Trichlorophenol	95954	NA	1 6E+5	4 6E+5	NA	2 9E+7	NLV	NLV	NLV	NLV	1 0E+10	4 5E+8	6 3E+8	1 0E+9 (D)	NA
2 4 6-Trichlorophenol	88062	NA	11,000	45 000	700	7 8E+5	NLV	NLV	NLV	NLV	1 3E+9	1 4E+7	1 9E+7	4 5E+7	NA
3-Trifluoromethyl-4-nitrophenol	88302	NA	1 1E+5	3 1E+5	NA	1 1E+8	NLV	NLV	NLV	NLV	ID	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA

SOIL: INDUSTRIAL AND COMMERCIAL II, III, AND IV

PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS

			Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact			
		#10	#21		#12	#13	#22	#23	#24	#25	#26	#27	#28	#29	#20
Chemical	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Industrial And Commercial Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Infinite Source Volatile Soil Inhalation Criteria (VSIC)	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria	Industrial and Commercial II	Commercial III	Commercial IV	Soil Saturation Concentration Screening Levels
MISCELLANEOUS															
Ammonia	7664417	NA	ID (N)	ID (N)	(AC)	ID	ID	ID	ID	ID	2 9E+9	ID	ID	ID	1 0E+7
Asbestos	1332214	NA	ID	ID	NA	ID	NLV	NLV	NLV	NLV	1 0E+7 (M)	2 4E+8	3 4E+8	1 0E+9 (D)	ID
Chloride (B)	16887006	NA	5 0E+6	5 0E+6	NA	ID	NLV	NLV	NLV	NLV	ID	5 0E+5 (F)	5 0E+5 (F)	5 0E+5 (F)	NA
Cyanide (B R)	57125	NA	4 000	4 000	400	2 5E+5 (P)	NLV	NLV	NLV	NLV	2 5E+5 (P)	2 5E+5 (P)	2 5E+5 (P)	2 5E+5 (P)	NA
Fluorine (soluble fluoride) (B)	7782414	NA	40 000	40 000	NA	2 6E+8	NLV	NLV	NLV	NLV	ID	2 7E+8	3 8E+8	8 9E+8	NA
Nitrate (B N)	14797558	NA	2 0E+5 (N)	2 0E+5 (N)	NA	1 0E+9 (D)	NLV	NLV	NLV	NLV	ID	ID	ID	ID	NA
Nitrite (B N)	14797650	NA	20 000 (N)	20 000 (N)	NA	4 7E+8	NLV	NLV	NLV	NLV	ID	ID	ID	ID	NA
Phosphorus (total) (B)	7723140	NA	1 3E+6	4 8E+6	NA	ID	NLV	NLV	NLV	NLV	ID	1 0E+9 (D)	1 0E+9 (D)	1 0E+9 (D)	NA
Sulfate	14808798	NA	5 0E+6	5 0E+6	NA	ID	NLV	NLV	NLV	NLV	ID	ID	ID	ID	NA
Urea	57136	NA	ID (N)	ID (N)	NA	ID	NLV	NLV	NLV	NLV	ID	ID	ID	ID	NA
PBBs															
Polybrominated biphenyls (J)	37324235	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	17,000	24,000	56 000	NA
GLYCOLS															
Diethylene glycol monobutyl ether	112345	NA	1 800	5,000	NA	8 6E+7	NLV	NLV	NLV	NLV	5 9E+8	5 4E+7	7 6E+7	1 1E+8 (C)	1 1E+8
Ethylene glycol	107211	NA	3 0E+5	8 4E+5	NA	1 1E+8 (C)	NLV	NLV	NLV	NLV	3 7E+10	1 1E+8 (C)	1 1E+8 (C)	1 1E+8 (C)	1 1E+8
Ethylene glycol monobutyl ether	111762	NA	3 900	11 000	NA	4 1E+7 (C)	ID	3 9E+5	2 7E+6	6 6E+6	7 1E+9	2,0E+7	2 8E+7	4 1E+7 (C)	4 1E+7
Propylene glycol	57556	NA	3 0E+6	8 4E+6	NA	1 0E+7 (C)	NLV	NLV	NLV	NLV	1 8E+11	1 0E+7 (C)	1 0E+7 (C)	1 0E+7 (C)	1 0E+7
CARBONYLS															
Acetaldehyde (I)	75070	NA	19 000	54,000	NA	1 1E+8 (C)	4 0E+5	2 1E+5	2 1E+5	2 9E+5	2 6E+8	9 7E+7	1 1E+8 (C)	1 1E+8 (C)	1 1E+8
Cyclohexanone (I)	108941	NA	5 2E+6	1 5E+7	NA	2 2E+8 (C)	32 000	ID	ID	ID	2 9E+10	2 2E+8 (C)	2 2E+8 (C)	2 2E+8 (C)	2 2E+8
Formaldehyde	50000	NA	26 000	76,000	2 400	6 0E+7 (C)	65 000	43 000	69 000	1 5E+5	3 0E+8	6 0E+7 (C)	6 0E+7 (C)	6 0E+7 (C)	6 0E+7
LOW MOLECULAR WEIGHT ACIDS															
Acetic acid (I)	64197	NA	9 0E+5 (M)	9 0E+5 (M)	9 0E+5 (M)	6 5E+8 (C)	NLV	NLV	NLV	NLV	7 4E+9	4 2E+8	5 9E+8	6 5E+8 (C)	6 5E+8
Formic acid (I U)	64186	NA	9 0E+5 (M)	9 0E+5 (M)	ID	1 1E+8 (C)	2 8E+6	9 0E+5 (M)	9 0E+5 (M)	9 0E+5 (M)	5 9E+7	1 1E+8 (C)	1 1E+8 (C)	1 1E+8 (C)	1 1E+8

FOOTNOTES

{A} Criterion is the State of Michigan Drinking Water Standard established pursuant to Section 5 of the Safe Drinking Water Act, Act No. 399 of the Public Acts of 1976

{B} Background, as defined in Rule 299.5701(c), may be substituted if higher than the calculated cleanup criteria. Background levels may not exceed criteria for all inorganic compounds.

{C} Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat Concentrations greater than Csat are acceptable cleanup criteria for this pathway where a site-specific demonstration indicates that free-phase contaminant is not present. Consult the Generic Soil Saturation Concentrations Technical Support Document (August 31, 1998) for further guidance on development of site-specific Csat values Risk-based criteria are available by contacting an ERD toxicologist

{D} Calculated criterion exceeds 100%, hence it is reduced to 100% (i e , 1 0E+9 ppb) Evaluation of free phase contaminant, environmental impacts, adverse aesthetics and acute or local toxicity is required

{E} Criterion is the aesthetic drinking water value, as required by Sec 20120(1)(5)

{F} Criterion is based on adverse impacts to plant life (i e , phytotoxicity)

{G} GSI value is pH or water hardness dependent The Final Chronic Value (FCV) for the protection of aquatic life must be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg $CaCO_3$/L, use 400 mg $CaCO_3$/L for the FCV calculation The FCV formula provides values in units of ug/L (ppb) The dissolved to total metal translator (T) is used to convert from a dissolved to a total FCV value. The generic GSI criterion is the lesser of the calculated FCV, the wildlife value (WV) and the surface water human non-drinking water value (HNDV) For these chemicals, the soil GSI protection criteria will be based on the final generic GSI criterion determined by the process described in this footnote Contact an ERD toxicologist for further guidance

Chemical	FCV Formula ug/L	FCV Conversion Factor (CF)	Dissolved to Total Metal Translator (T)	WV ug/L	HNDV ug/L
Beryllium	EXP(2 5279*(LnH)-10 7689)	NA	NA	NA	1,200
Cadmium	((EXP(0 7852*(LnH)-2 715))*CF(Cd))*T	CF(Cd) = 1 10167-[(LnH)*(0 04184)]	2 1	NA	130
Chromium (III)	((EXP(0 819*(LnH)+0 6848))*0 86)*T	NA	1 5	NA	9,400
Copper	((EXP(0 8545*(LnH)-1 702))*0 96)*T	NA	1 5	NA	64,000
Lead	((EXP(1 273*(LnH)-3 296))*CF(Pb))*T	CF(Pb) = 1 46203-[(LnH)*(0 14571)]	4 5	NA	190
Manganese	EXP(0 859*(LnH)+1 957)	NA	NA	NA	59,000
Nickel	((EXP(0 846*(LnH)+0 0584))*0 997)*T	NA	$1+(0\ 49*(SS)^{0\ 4281})$	NA	2 1E+5
Pentachlorophenol	EXP(1 005*(pH)-5 134)	NA	NA	NA	2 8
Zinc	((EXP(0 8473*(LnH)+0 884))*0 986)*T	NA	2 1	NA	22,000

Where,

EXP(x) = The base of the natural logarithm raised to power x (e^x)
LnH = The natural logarithm of water hardness in mg $CaCO_3$/L.
SS = Total suspended solids in mg/L
* = The multiplication symbol

{H} Valence-specific chromium data (Cr III and Cr VI) must be compared to the corresponding valence-specific cleanup criteria If analytical data are provided for "total" chromium only, then values for Cr VI must be applied as the cleanup criteria Cr III cleanup criterion for protection of drinking water can only be used at sites where groundwater is prevented from being used as a public water supply, currently and in the future

{I} Chemical may exhibit the characteristic of ignitability as defined in 40 CFR 261 21 Contact an ERD toxicologist for further direction

{J} Chemical may be present in several isomer forms. Isomer-specific concentrations must be added together for comparison to criteria Contact an ERD toxicologist if further explanation is needed

{K} Chemical may be flammable and/or explosive Criteria are under development Contact an ERD toxicologist for further direction.

{L} Higher groundwater concentrations (up to 15 ug/L) may be acceptable if the soil concentration is less than 400 ppm and groundwater migrating off-site will not result in unacceptable exposures Contact an ERD toxicologist if further explanation is needed

{M} Calculated criterion is below the analytical Target Detection Limit (TDL), therefore, the criterion defaults to the TDL.

{N} The concentrations of all potential sources of nitrate-nitrogen (e g , ammonia-N, nitrite-N, nitrate-N) must be added together and compared to nitrate criteria. Contact an ERD toxicologist if further direction is needed

{O} All polychlorinated and polybrominated dibenzodioxins and dibenzofurans are considered as one hazardous substance. The concentration of all isomers present at a facility, expressed as an equivalent concentration of 2,3,7 8-tetrachlorodibenzo-p-dioxin based upon their relative potency, must be added together and compared to the criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin Contact an ERD toxicologist for details.

{P} Comparison of on-site cyanide concentrations to groundwater criteria is based on amenable analysis Comparison of cyanide concentrations to soil criteria is based on total cyanide analysis The cyanide soil DCC of 2 5E+5 ug/kg is the EPA action level for releasable cyanide Higher total cyanide concentrations may be acceptable if analytical data are provided to demonstrate that levels of releasable cyanide do not exceed the action level. Amendable analysis for soil leachate testing may be used to demonstrate compliance with soil criteria protective of groundwater Alternative analytical methods may be acceptable with site-specific approval. Contact an ERD toxicologist if further direction is needed.

{Q} Criteria for carcinogenic polycyclic aromatic hydrocarbons (PAHs) were developed using "relative potential potencies" (RPPs) to benzo(a)pyrene.

{R} Chemical may exhibit the characteristic of reactivity as defined in 40 CFR 261.23 Contact an ERD toxicologist for further direction

{S} Criterion defaults to the chemical-specific water solubility limit

{T} Refer to the Toxic Substances Control Act (TSCA), 40 CFR 761, Subparts D and G, as amended to determine the applicability of TSCA cleanup standards. Alternatives to compliance with the standards listed below are possible under Subpart D. New releases may be subject to the standards identified in Subpart G Use Part 201 soil direct contact criteria in the table below where TSCA standards are not applicable

LAND USE CATEGORY	TSCA, Subpart D	PART 201
Residential & Commercial I	1,000 ppb, or 10,000 ppb if capped	1,200 ppb
Industrial & Commercial II	1,000 ppb, or 10,000 ppb if capped	9,900 ppb
Commercial III	1,000 ppb, or 10,000 ppb if capped	14,000 ppb
Commercial IV	25,000 ppb, or 50,000 ppb if fenced and marked, or 1 0E+5 ppb if capped	26,000 ppb

{U} Chemical may exhibit the characteristic of corrosivity as defined in 40 CFR 261 22 Contact an ERD toxicologist for further direction

{V} Criterion is the aesthetic drinking water value (secondary maximum contaminant level), as required by Sec 20120(a)(5) Higher concentrations (up to 200 ug/L) may be acceptable on a case-by-case basis Contact an ERD toxicologist for further explanation

{W} Concentrations of trihalomethanes in groundwater must be added together to determine compliance with the State of Michigan Drinking Water Standard of 100 ug/L Concentrations of trihalomethanes in soil must be added together to determine compliance with the drinking water protection criterion of 2,000 ug/kg.

{X} The GSI criterion shown is not protective for surface water that is used as a drinking water source. For groundwater discharges to the Great Lakes and their connecting waters or discharges in close proximity to water supply intake(s) in inland surface waters, the generic GSI criterion is the Surface Water Drinking Water Value (SWDWV) listed in the table below except for those SWDWV indicted with an asterisk For SWDWV with an asterisk, the generic GSI criterion is the lesser of the SWDWV, the WV and the calculated FCV (see table in footnote {G}) Soil protection criteria based on the SWDWV are listed below except for those values with an asterisk Soil protection criteria for compounds with an asterisk are calculated based on the GSI criteria developed using the procedure described in {G} Contact an ERD toxicologist if further guidance is needed

Chemical	Chemical Abstract Service Number	Surface Water Drinking Water Values (SWDWV) (ug/L)	Soil Protection Criteria for SWDWV (ug/Kg)
Acrylonitrile	107131	0 87	17
Alachlor	15972608	3 5	70
Arsenic	7440382	50	16,000
Atrazine	1912249	4 3	86
Benzene	71432	12	240
Butyl benzyl phthalate	85687	6 9	1,300
Cadmium	7440439	2 5*	*
Carbon tetrachloride	56235	5 6	110
Chloroform	67663	77	1,500
Chromium (III)	16065831	120*	*
Cyanazine	21725462	10 (M)	200
3,3'-Dichlorobenzidine	91941	0 3 (M)	500
1,2-Dichloroethane	107062	6	120
1,1-Dichloroethylene	75354	24	480
1,2-Dichloropropane	78875	9 1	180
N,N-Dimethylacetamide	127195	700	14,000
1,4-Dioxane	123911	34	680
Hexachloroethane	67721	5 3	1,500

Chemical	Chemical Abstract Service Number	Surface Water Drinking Water Values (SWDWV) (ug/L)	Soil Protection Criteria for SWDWV (ug/Kg)
Isophorone	78591	310	6,200
Lead	7439921	14*	*
Methyl-tert-butyl ether (MTBE)	1634044	120	2,400
Methylene chloride	75092	47	940
Molybdenum	7439987	120	2,400
Nitrobenzene	98953	4 7	94
Pentachlorophenol	87865	1 8*	*
1,2,4,5-Tetrachlorobenzene	95943	2 8	3,300
1,1,2,2-Tetrachloroethane	79345	3 2	64
Tetrachloroethylene	127184	11	220
Tetrahydrofuran	109999	350	7,000
Thallium	7440280	1 2	910
1,1,2-Trichloroethane	79005	12	240
Trichloroethylene	79016	29	580

{Y} Source size modifiers for Soil Inhalation Criteria (SIC) for Ambient Air Consult the Technical Support Document (TSD) for the SIC or contact an ERD toxicologist if further guidance is needed

Source Size sq feet or acres	Modifier
400 sq feet	3 17
1000 sq feet	2 2
2000 sq feet	1 76
1/2 acre	1
1 acre	0 87
5 acre	0 66
10 acre	0 6
32 acre	0 5
100 acre	0 43

{Z} Groundwater concentrations at or less than the health-based drinking water criterion are likely to have adverse odors Development of an aesthetic drinking water criterion is in process The soil health-based drinking water protection criterion may also not be protective of adverse aesthetic impacts Adverse odors in groundwater and soil values protective of these effects must be addressed qualitatively until an aesthetic criterion is finalized

{AA} Certain contaminants detected in groundwater may be adsorbed to particulates rather than dissolved in water Physiochemical properties which indicate high particulate adsorption include low water solubility (S) a high water-organic carbon partition coefficient (Koc) and a high octanol-water partition coefficient (Kow). Contaminants exhibiting these characteristics are not likely to be found in the dissolved phase. For these compounds, filtered groundwater samples may be more appropriate for comparison to the GCC Examples are some PAHs, PCBs and some pesticides

{AB} The state drinking water standard for asbestos is in units of fibers per milliliter of water (f/mL) longer than 10 millimicrons. Soil concentrations of asbestos are determined by polarized light microscopy (PLM) Consult an ERD toxicologist if further guidance is needed

{AC} The GSI criteria for unionized ammonia are 29 ug/L and 53 ug/L for coldwater and warmwater streams, respectively The unionized ammonia concentration for comparison to the GSI is calculated from the measured total ammonia concentration based on pH and temperature for the receiving surface water and the discharge plume. The soil GSI PC are 580 ug/Kg and 1,100 ug/Kg for coldwater and warmwater streams, respectively. Consult an ERD toxicologist for further assistance

ID = *Inadequate data* to develop criterion.

IP = Development of generic GSI value *in process* This notation is used for those chemicals on the Rule 57 Water Quality Values table where the NLS (no literature search) notation is indicated for one or more of the endpoints required for development of a generic GSI. Additional work needed to address these endpoints may either be underway, or not yet initiated by the Surface Water Quality Division Consult an ERD toxicologist for further assistance.

NA = Criterion or value is *not available* or, as is the case for Csat, *not applicable.*

NLL = Chemical is *not likely to leach* under most soil conditions

NLV = Chemical is *not likely to volatilize* under most conditions

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